HITACHI

Inspire the Next

SERVICE MANUAL

NTSC
ATSC

DW3-G
CHASSIS

PA No. 0227

L47S601 / DW3G
L47V651 / DW3G

R/C: CLU-4373A	p/n HL02403	L47S601
R/C: CLU-4374A	p/n HL02404	L47V701

TO GO TO A CHAPTER, CLICK ON ITS HEADING BELOW

CONTENTS

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of Electric shock do not perform any servicing other than that contained in the operating instructions Unless you are qualified to do so. Before servicing this chassis, it is important that the service Technician read the “IMPORTANT SAFETY INSTRUCTIONS” in this service manual.

SAFETY NOTICE
USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a ⚠ on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician Read and follow the “Important Safety Instructions” in this Service Manual.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT

Version 0228-3
Updated 02-14-08

LIQUID CRISTAL DISPLAY PANEL

SEPTEMBER 2007 **HHEA-MANUFACTURING DIVISION**

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety-related notes located on or inside the cover case and on the chassis or LCD module.

WARNING: Since the chassis of this receiver is connected to one side of the AC power supply during operation, whenever the receiver is plugged-in service should not be attempted by anyone unfamiliar with the precautions necessary when working on this type of receiver.

1. When service is required, an isolation transformer should be inserted between power line and the receiver before any service is performed on a “HOT” chassis receiver.

2. When replacing a chassis in the receiver, all the protective devices must be put back in place, such as barriers, non-metallic knobs, insulating cover-shields, and isolation resistors, capacitors, etc.

3. When service is required, observe the original lead dress.

4. Always use manufacturer’s replacement components. Critical components as indicated on the circuit diagram should not be replaced by another manufacturer’s. Furthermore, where a short circuit has occurred, replace those components that indicate evidence of over heating.

5. Before returning a serviced receiver to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the receiver by the manufacturer has become defective, or inadvertently defeated during servicing.

Therefore, the following checks should be performed for the continued protection of the customer and service technician.

Leakage Current Cold Check

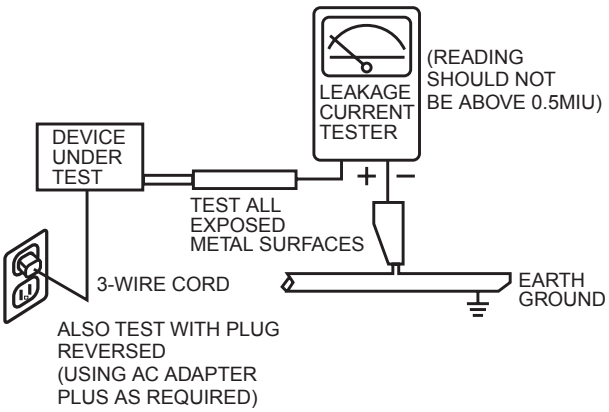
With the AC plug removed from the 120V AC 60Hz source, place a jumper across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground.

Using an insulation tester (DC500V), connect one of its leads to the AC plug jumper and touch with the other lead each exposed metal part (antennas, screwheads, metal overlays, control shafts, etc.), particularly any exposed metal part having a return path to the chassis should have a resistor reading over 4MΩ. Any resistance value below this range indicates an abnormality which requires corrective action. An exposed metal part not having a return path to the chassis will indicate an open circuit.

Leakage Current Hot Check

Plug the AC line cord directly into a 120V AC outlet. (Do not use an isolation transformer during this test.) Use a leakage current tester or a metering system that complies with the American National Standards Institute (ANSI) C101.0 Leakage Current for Appliances. In the case of the LCD, set the AC cable first in the plugged position and then in the unplugged position, measure from across Line 1 and Line 2 of the three plug prongs, do not connect with the third prong, which is physical ground, to all exposed metal parts of the instrument (antennas, handle bracket, metal cabinet, screw heads, metallic overlays, control shafts, etc.), especially any exposed metal parts that offer an electrical return path to the chassis. Any current measured must not exceed 0.5 MIU. Reverse the instrument power cord plug in the outlet and repeat test.

AC LEAKAGE TEST



ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE RECEIVER TO THE CUSTOMER.

NOTE:
Do not work before the LCD TV set is unplugged from the power line.
This set does not have a Main Power Switch.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in HITACHI television receivers have special safety-related characteristics. These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified with a ⚠ mark in the schematics and parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the HITACHI-recommended replacement component, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

Product safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current HITACHI Service Manual. A subscription to, or additional copies of HITACHI Service Manuals may be obtained at a nominal charge from HITACHI Sales Corporation.

L47S601 and L47V651 - LCD TV

1. Follow the general caution recommendations from “Safety precautions” section.
2. If necessary to replace Panel module, this work must be started after the panel module and the AC/DC Power supply becomes sufficiently cool.
3. Special care must be taken with the display area to avoid damaging its surface.
4. The Panel Module shall not be touched with bare hands to protect its surface from stains.
5. It is recommended to use clean soft gloves during the replacing work of the Panel module in order to protect, not only the display area of the panel module but also the serviceman.
6. Signal, power supply P.W.B.’s and LCD driving circuits P.W.B.’s are assembled on the rear side of the LCD module, take special care with this fragile circuitry; particularly, Flexible Printed Circuits bonded to surrounding edges of the panel. They are not strong enough to withstand harsh outer mechanical forces. Avoid touching the flexible printed circuits by not only your hands, but also tools, chassis, or any other object. Extreme bending of the connectors must be avoided too. In case the flexible printed circuits are damaged, the corresponding addressed portions of the screen will not be lit and exchange of the panel will be required.

SAFETY NOTICE
USE ISOLATION TRANSFORMER
WHEN SERVICING

POWER SOURCE

This LCD television is designed to operate on 120 Volts/60Hz,, AC house current. Insert the power cord into a 120 Volts/60Hz outlet.

NEVER CONNECT THE LCD TV TO OTHER THAN THE SPECIFIED VOLTAGE OR TO DIRECT CURRENT AND TO 50HZ. TO PREVENT ELECTRIC SHOCK,DO NOT USE THE LCD TELEVISION’S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR THE OUTLETS UNLESS THE BLADES AND GROUND TERMINAL CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

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SERVICING PRECAUTIONS

CAUTION: Before servicing instruments covered by this service data and its supplements and addenda, read and follow the "Important Safety Instructions" on page 3 of this publication.

NOTE: If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions on page 3 of this publication, always follow the safety precautions. Remember: Safety First.

General Servicing Guidelines

1. Always unplug the instrument AC power cord from the AC power source before:
   a. Removing or reinstalling any component, circuit board, module, or any other instrument assembly.

   b. Disconnecting or reconnecting any instrument electrical plug or other electrical connection.

   c. Connecting a test substitute in parallel with an electrolytic capacitor in the instrument.

   CAUTION: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.

2. Do not spray chemicals on or near this instrument or any of its assemblies.

3. Unless specified otherwise in these service data, clean electrical contacts by applying the following mixture to the contacts with a pipe cleaner, cotton-tipped stick or comparable nonabrasive applicator: 10% (by volume) Acetone and 90% (by volume) isopropyl alcohol (90%-99% strength).
   CAUTION: This is a flammable mixture. Unless specified otherwise in these service data, lubrication of contacts is not required.

4. Do not defeat any plug/socket of voltage interlocks with which instruments covered by this service data might be equipped.

5. Do not apply AC power to this instrument and/or any of its electrical assemblies unless all solid-state device heat-sinks are correctly installed.

6. Always connect the test instrument ground lead to the appropriate instrument chassis ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

7. Use with this instrument only the test fixtures specified in this service data.
   CAUTION: Do not connect the test fixture ground strap to any heatsink in this instrument.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.

2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.

3. Use only a grounded-tip soldering iron to solder or desolder ES devices.

4. Use only an anti-static type solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES device.

5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.

6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
   CAUTION: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

General Soldering Guidelines

1. Use a grounded-tip, low-wattage soldering iron and appropriate tip size and shape that will maintain tip temperature within the range 500°F to 600°F.

2. Use an appropriate lead free solder (see page 8). Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.

3. Keep the soldering iron tip clean and well-tinned.

4. Thoroughly clean the surfaces to be soldered. Use a small wire-bristle (0.5 inch or 1.25 cm) brush with a metal handle. Do not use freon-propelled spray-on cleaners.

5. Use the following desoldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

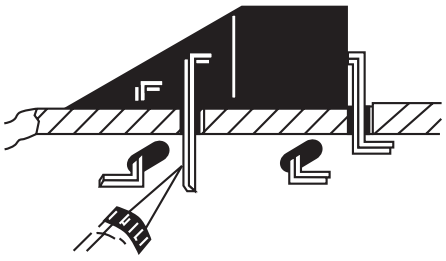
   b. Heat the component lead until the solder melts. Quickly draw away the melted solder with an anti-static, suction-type solder removal device or with solder braid.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil.

6. Use the following soldering technique.
   a. Allow the soldering iron tip to reach normal temperature (500°F to 600°F).

   b. First, hold the soldering iron tip and solder strand against the component lead until the solder melts.

   c. Quickly move the soldering iron tip to the junction of the component lead and the printed circuit foil, and hold it there only until the solder flows onto and around both the component lead and the foil.
      CAUTION: Work quickly to avoid overheating the circuit board printed foil or components.

   d. Closely inspect the solder area and remove any excess or splashed solder with a small wire-bristle brush.



Use Soldering Iron to Pry Leads

IC Removal/Replacement

Some Hitachi unitized chassis circuit boards have slotted holes (oblong) through which the IC leads are inserted and then bent flat against the circuit foil. When holes are the slotted type, the following technique should be used to remove and replace the IC. When working with boards using the familiar round hole, use the standard technique as outlined in paragraphs 5 and 6 above.

Removal

1. Desolder and straighten each IC lead in one operation by gently prying up on the lead with the soldering iron tip as the solder melts.

2. Draw away the melted solder with an anti-static suction-type solder removal device (or with solder braid) before removing the IC.

Replacement

1. Carefully insert the replacement IC in the circuit board.

2. Carefully bend each IC lead against the circuit foil pad and solder it.

3. Clean the soldered areas with a small wire-bristle brush. (It is not necessary to reapply acrylic coating to areas.)

"Small-signal" Discrete Transistor Removal/Replacement

1. Remove the defective transistor by clipping its leads as close as possible to the component body.

2. Bend into a "U" shape the end of each of the three leads remaining on the circuit board.

3. Bend into a "U" shape the replacement transistor leads.

4. Connect the replacement transistor leads to the corresponding leads extending from the circuit board and crimp the "U" with long nose pliers to insure metal to metal contact, then solder each connection.

Power Output Transistor Devices Removal/Replacements

1. Heat and remove all solder from around the transistor leads.

2. Remove the heatsink mounting screw (if so equipped).

3. Carefully remove the transistor from the circuit board.

4. Insert new transistor in circuit board.

5. Solder each transistor lead, and clip off excess lead.

6. Replace heatsink.

Diode Removal/Replacement

1. Remove defective diode by clipping its leads as close as possible to diode body.

2. Bend the two remaining leads perpendicularly to the circuit board.

3. Observing diode polarity, wrap each lead of the new diode around the corresponding lead on the circuit board.

4. Securely crimp each connection and solder it.

5. Inspect (on the circuit board copper side) the solder joints of the two "original leads". If they are not shiny, reheat them and, if necessary, apply additional solder.

Fuses and Conventional Resistor Removal/Replacement

1. Clip each fuse or resistor lead at top of circuit board hollow stake.

2. Securely crimp leads of replacement component around stake 1/8 inch from top.

3. Solder the connections.
   CAUTION: Maintain original spacing between the replaced component and adjacent components and the circuit board, to prevent excessive component temperatures.

Circuit Board Foil Repair

Excessive heat applied to the copper foil of any printed circuit board will weaken the adhesive that bonds the foil to the circuit board, causing the foil to separate from, or "lift-off," the board. The following guidelines and procedures should be followed whenever this condition is encountered.

In Critical Copper Pattern Areas

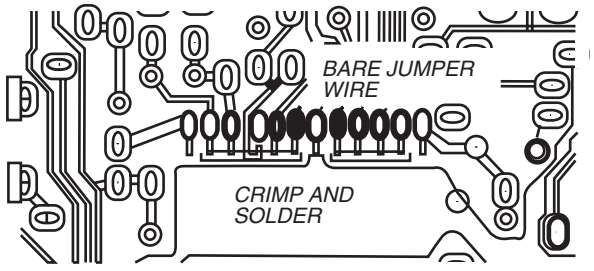
High component/copper pattern density and/or special voltage/current characteristics make the spacing and integrity of copper pattern in some circuit board areas more critical than in others. The circuit foil in these areas is designated as Critical Copper Pattern. Because Critical Copper Pattern requires special soldering techniques to ensure the maintenance of reliability and safety standards, contact your Hitachi personnel.

At IC Connections

To repair defective copper pattern at IC connections, use the following procedure to install a jumper wire on the copper pattern side of the circuit board. (Use this technique only on IC connections.)

1. Carefully remove the damaged copper pattern with a sharp knife. (Remove only as much copper as absolutely necessary.)

2. Carefully scratch away the solder resist and acrylic coating (if used) from the end of the remaining copper pattern.



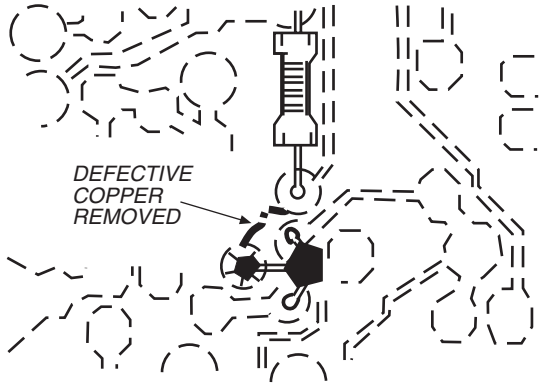
Install Jumper Wire and Solder

3. Bend a small "U" in one end of a small-gauge jumper wire and carefully crimp it around the IC pin. Solder the IC connection.

4. Route the jumper wire along the path of the cut-away copper pattern and let it overlap the previously scraped end of the good copper pattern. Solder the overlapped area, and clip off any excess jumper wire.

At Other Connections

Use the following technique to repair defective copper pattern at connections other than IC Pins. This technique involves the installation of a jumper wire on the component side of the circuit board.



Insulated Jumper Wire

1. Remove the defective copper pattern with a sharp knife. Remove at least 1/4 inch of copper, to ensure hazardous condition will not exist if the jumper wire opens.

2. Trace along the copper pattern from both wire sides of the pattern break and locate the nearest component directly connected to the affected copper pattern.

3. Connect insulated 20-gauge jumper wire from the nearest component on one side of the pattern break to the lead of the nearest component on the other side. Carefully crimp and solder the connections.
   CAUTION: Be sure the insulated jumper wire is dressed so that it does not touch components or sharp edges.

NOTE: ***These components are affixed with glue. Be careful not to break or damage any foil under the component or at the pins of the ICs when removing. Usually applying heat to the component for a short time while twisting with tweezers will break the component loose.***

Leadless Chip Components (surface mount)

Chip components must be replaced with identical chips due to critical foil track spacing. There are no holes in the board to mount standard transistors or diodes. Some chip capacitor or resistor board solder pads may have holes through the board, however the hole diameter limits standard resistor replacement to 1/8 watt. Standard capacitors may also be limited for the same reason. It is recommended that identical chip components be used. .

Chip resistors have a three digit numerical resistance code -1st and 2nd significant digits and a multiplier. Example: 162 = 1600 or 1.6KΩ resistor, 0 = 0Ω (jumper).

Chip capacitors generally do not have the value indicated on the capacitor. The color of the component indicates the general range of the capacitance.

Chip transistors are identified by a two letter code. The first letter indicates the type and the second letter, the grade of transistor.

Chip diodes have a two letter identification code as per the code chart and are a dual diode pack with either

common anode or common cathode. Check the parts list for correct diode number.

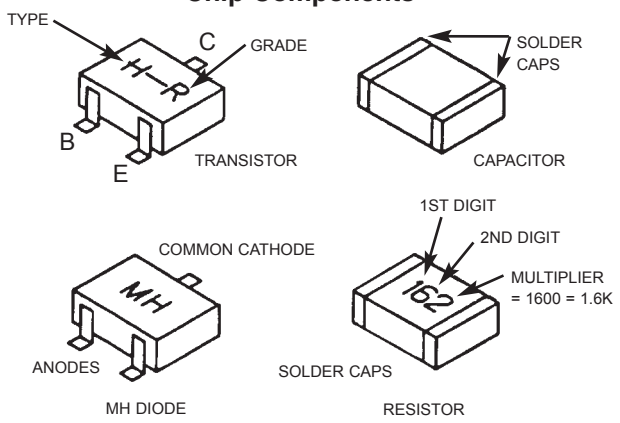
Component Removal

1. Use solder wick to remove solder from component end caps or terminals.
2. Without pulling up, carefully twist the component with tweezers to break the adhesive.
3. Do not reuse removed leadless or chip components since they are subject to stress fracture during removal .

Chip Component Installation

1. Put a small amount of solder on the board soldering pads.
2. Hold the chip component against the soldering pads with tweezers or with a miniature alligator clip and apply heat to the pad area with a 30 watt iron until solder flows. Do not apply heat for more than 3 seconds

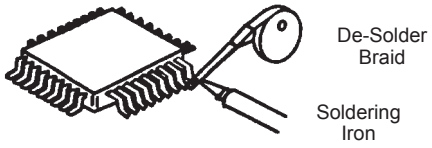
Chip Components



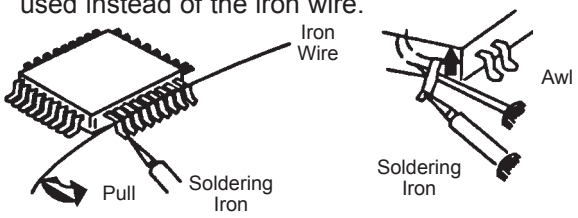
How to Replace Flat-IC —Required Tools—

- Soldering iron
- iron wire or small awl
- De-solder braids
- Magnifier

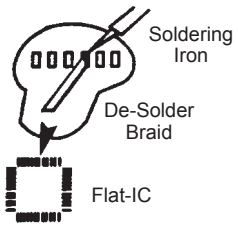
1. Remove the solder from all of the pins of a Flat-IC by using a de-solder braid.



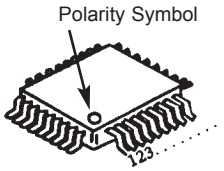
2. Put the iron wire under the pins of the Flat-IC and pull it in the direction indicated while heating the pins using a soldering iron. A small awl can be used instead of the iron wire.



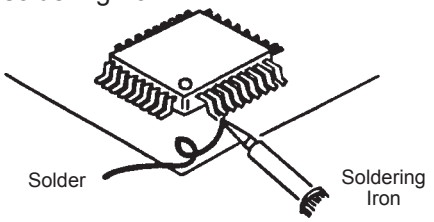
3. Remove the solder from all of the pads of the Flat-IC by using a de-solder braid.



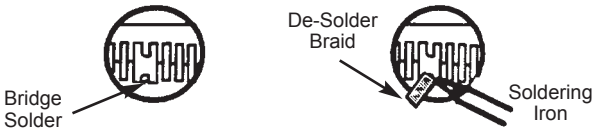
4. Position the new Flat-IC in place (apply the pins of the Flat-IC to the soldering pads where the pins need to be soldered). Properly determine the positions of the soldering pads and pins by correctly aligning the polarity symbol.



5. Solder all pins to the soldering pads using a fine tipped soldering iron.



6. Check with a magnifier for solder bridge between the pins or for dry joint between pins and soldering pads. To remove a solder bridge, use a de-solder braid as shown in the figure below.



Information for service about lead-free solder introduction

Hitachi introduced lead-free solder to conserve the "Earth Environment".
Please refer to the following before servicing.

(1) Characteristic of lead-free solder

Melting point of lead free solder is 40-50°C higher than solder containing lead.

(2) Solder for service

Following composition is recommended.

" Sn - 3.0Ag - 0.5Cu " , or " Sn - 0.7 Cu "

Lead solder can be used, but there is a possibility of failure due to insufficient strength of the solder.

Caution when using solder containing lead.

Please remove previous solder as much as possible from the soldering point.
When soldering, please perfectly melt the lead-free solder to mix well with the previous solder.

(3) Soldering iron for lead-free solder.

Melting point of lead-free solder is higher than solder containing lead.
Use of a soldering tool "with temperature control" and "with much thermal capacitance" is recommended.
(Recommended temperature control : 320°C - 450°C)

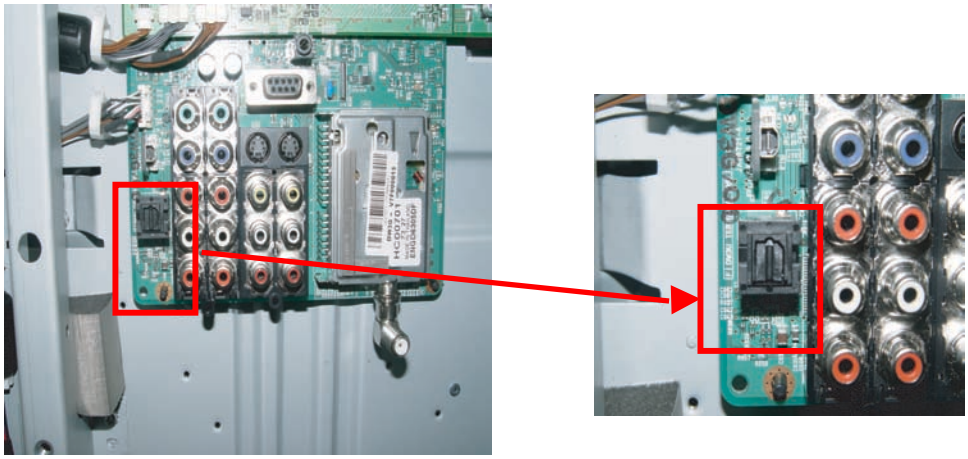
Recommended temperature

PWB with chip parts	320°C +/- 30°C
PWB without chip parts	380°C +/- 30°C
Chassis, metal, shield etc.	420°C +/- 30°C

(4) Identification of lead-free PWB

2004 models	>> lead-free solder is introduced
2006 models	>> lead-free solder apply

On lead-free PWB, "F" is added at the beginning of stamp on PWB. (e.g. F DW3-TERMINAL)



AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

FCC Information

This device complies with part15 of the FCC Rules.Operation is subject to the following two conditions : (1) This decide may not cause harmful interference and (2) This decide must accept any interference received, including interference that may cause undesired operation.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi America ,Ltd. Home Electronics Division may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

Note

This LCD Television receiver will display television closed captioning, (CC) in accordance with paragraph 15.119 of the FCC rules.

INDUSTRY CANADA AGENCY REGULATORY INFORMATION

Cable Compatible Television Apparatus- Tèlèvision câblocompatible, Canada.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

ACKNOWLEDGMENTS AND TRADEMARKS

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HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

INTRODUCTION

This HITACHI Service Manual is intended for the qualified service personnel and it contains the necessary information for troubleshooting the LCD television set in case of malfunction.

This service manual includes the information for the next models and chassis.

MODEL	CHASSIS
L47S601	DW3G
L47V651	DW3G

DIMENSIONS:

Height: 805 mm(with table top stand).

Width: 1151.3 mm

Depth: 366 mm (with table top stand).

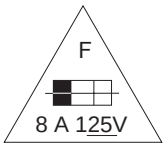
POWER RATINGS:

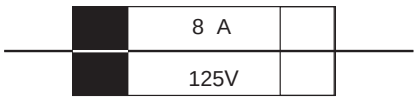
No.	Model Name	Indicated Value			PST(W)		Chassis
		Max Rating		Average Rating (W)	Without POD. less than 1W	With POD. less than 14W	
		(W)	(A)				
1	L47S601	303	2.55	303	0.6	-	DW3G
2	L47V651	303	2.55	303	0.6	-	DW3G

CIRCUIT PROTECTION

CAUTION: Below is an EXAMPLE only. See Replacement Parts List for details. The following symbol near the fuse indicates fast operation fuse (to be replaced). Fuse ratings appear within the symbol.

Example:





"RISK OF FIRE - REPLACE FUSE AS MARKED"

The rating of fuse F1 is 8 A - 125V.
Replace with the same type fuse for continued protection against fire.

SPECIFICATIONS

APPEARANCE

Model name	Series Name	Cabinet Design
L47S601	UltraVision	Gloss Black/Frame, High Gloss Black/Bezel, High Gloss Hidden/SP
L47V651	UltraVision	Gloss Black /Frame,High Gloss Black/Bezel, High Gloss Hidden/SP

SYSTEM

No.	Model name	Channel coverage band			Reception system		
		VHF(ch)	UHF(ch)	CATV(ch)	NTSC	ATSC (8VSB)	64QAM/ 256QAM
1	L47S601	2~13	14~69	A-5~A-1, A~I,J~W,W+1~W+94	X	X	X
2	L47V651				X	X	X

STRUCTURAL DIMENSIONS

No.	Model name	WIDTH [mm]	HEIGHT [mm]	DEPTH [mm]	WEIGHT [kg]	Note
1	L47S601	1151.3	805*	366*	33.7	*With table top stand.
2	L47V651	1151.3	805*	366*	33.7	*With table top stand

EXTERNAL TERMINALS AND JACKS

Model name	Rear										
	A/V IN	S IN	COMP. IN	HDMI	M OUT	A OUT	Subwoofer OUT	ANT IN	OPT OUT	DV IN IEEE 1394	POD CARD
L47S601	3	1	2	2	1	1	–	1	1	–	–
L47V651	3	1	2	2	1	1	–	1	1	–	–

Model name	Side							Rear			
	A/V IN	S IN	COMP. IN	HDMI	Photo (SD)	Upgrade	DV IN	IR OUT	IR OUT /G-LINK	SWIVEL OUT	RS232C
L47S601	1	–	–	1	–	1	–	(1:Service)	–	1	1
L47V651	1	–	–	1	1	1	–	(1:Service)	–	1	1

MAIN FEATURES

No.	Feature	L47S601	L47V651
1	Panel	LPL	LPL
2	Resolution	1920x 1080p	1920x 1080p
3	Front Filter with ARF (Transparency)	–	–
4	Seine2	X	X
5	FRC (FC8)	–	–
6	One NTSC/ATSC Tuner	X	X
7	POD (Point Of Deployment)	–	–
8	PinP (Digital/External Analog SPLIT)	–	X
9	3 Picture Mode	X	X
10	Color Temperature Mode	4	4
11	Color Decoding Adjustment	–	–
12	Color Management Adjustment	–	–
13	7 Mode Aspect Ratio Interchangeable	X	X

No.	Feature	L47S601	L47V651
14	EPG (G-GUIDE) Function	–	–
15	SD-card Photo Viewer	–	X
16	Audio Output	10W x2	10W x2
17	Swivel	Power	Power
18	AV NET, AV NET Learning	–	–
19	IR Pass Through	–	–
20	OSD Design	B	C
21	Energy Star	–	–

TABLE OF CONTENTS

POWER CONSUMPTION

MODEL NAME	INDICATED VALUE			PST [W]		CHASSIS
	Max. Rating	Max. Rating	(Average Rating)	Without POD	With POD	
L47S601	303W	2.55A	303W	0.6W	-	DW3G
L47V651	303W	2.55A	303W	0.6W	-	DW3G

SAFETY KEY COMPONENTS

No.	Model	Symbol No.	P# (Rating)	Standard
1	L47S601/V651, L42S601/V651: (note)	F1	FN00476（8A/125V）	UL/CSA
2	L47S601/V651, L42S601/V651: (note)	F201	（4A/250V ）	UL/CSA
3	L47S601/V651, L42S601/V651: (note)	F101	（1A/250V ）	UL/CSA

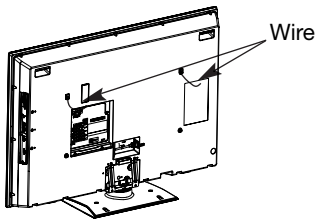
NOTE: The FUSE is in the power supply unit.

How To Set Up Your New Hitachi LCD Television

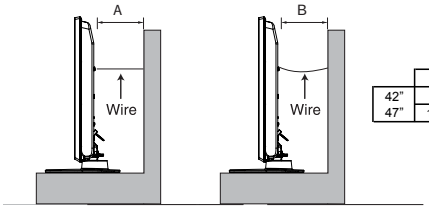
To take measures to prevent the LCD Flat Panel Television from tipping over and prevent possible injury it is important to mount the unit in a stable and flat surface.

Securing to a Wall

1. Using metallic wire (two places) fasten the set to the clamping screw on the rear of the LCD Flat Panel TV as shown below.



2. Keep the LCD television 4 inches away from the wall except when mounted using the wall mount bracket.
3. Secure the television to the wall as shown.



	A	B
42"	5 in.	12 in.
47"	12.5 cm	30 cm

* Please adjust the wire length to avoid touching the wall when turning the TV.

NOTES: *1. Do not block the ventilation holes of the LCD Television. Blocking the ventilation holes might cause fire or defect.*

2. In case of an abnormal symptom, unplug the AC cord.

3. If you purchased the wall mount bracket option, please ask for professional installer. Do not install by yourself.

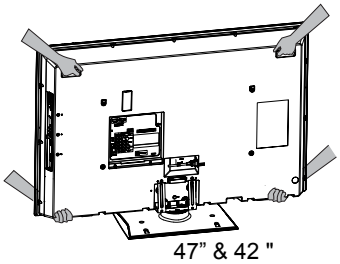
4. Install the unit at a proper area where it does not expose anyone to any danger of hitting themselves (for example their hands, head or face, etc.) against the edge of the unit and cause personal injury.

5. If the Power Swivel feature will not be used, the LCD television should be secured to the wall as shown in fig. (a).

6. If the Power Swivel feature will be used, the LCD television should be secured to the wall as shown in fig. (b).

Caution when moving the main unit

As this product is heavy, whenever it is moved, two people are required to transport it safely. Whenever the unit is moved it should be lifted forward using the top and base on both sides of the Television for stability. When moving the Television, lift the handles , then support the bottom frame as shown below.



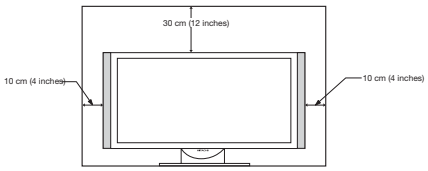
47" & 42 "

ANTENNA

Unless your LCD Television is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in an exceptionally good signal area that is free from interference and multiple image ghosts, an indoor antenna may be sufficient.

LOCATION

Select an area where sunlight or bright indoor illumination will not fall directly on the picture screen. Also, be sure that the location selected allows a free flow of air to and from the perforated back cover of the set. In order to prevent an internal temperature increase, maintain a space of 10 cm (4 inches) from the sides/back of the Television, and 30 cm (12 inches) from the top of the television to the ceiling. To avoid cabinet warping, cabinet color changes, and increased chance of set failure, do not place the TV where temperatures can become excessively hot, for example, in direct sunlight or near a heating appliance, etc.

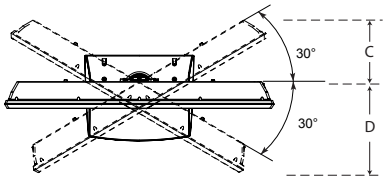


CONNECT POWER SWIVEL CABLE

Connect one end of cable to the swivel slot of the LCD Rear Panel. Connect the other end to swivel slot of the Table Top Stand. For more detail information, please refer to next page installation instruction.

TURNING ANGLE

The maximum turning angle is 30° (left and right). Do not place any objects on the path of the monitor when using the power swivel feature.



	C	D
42"	9.1 in.	14.05 in.
	23.1 cm	35.7 cm
47"	10.2 in.	15.15 in.
	25.9 cm	38.5 cm

How to set up your new Hitachi LCD Television

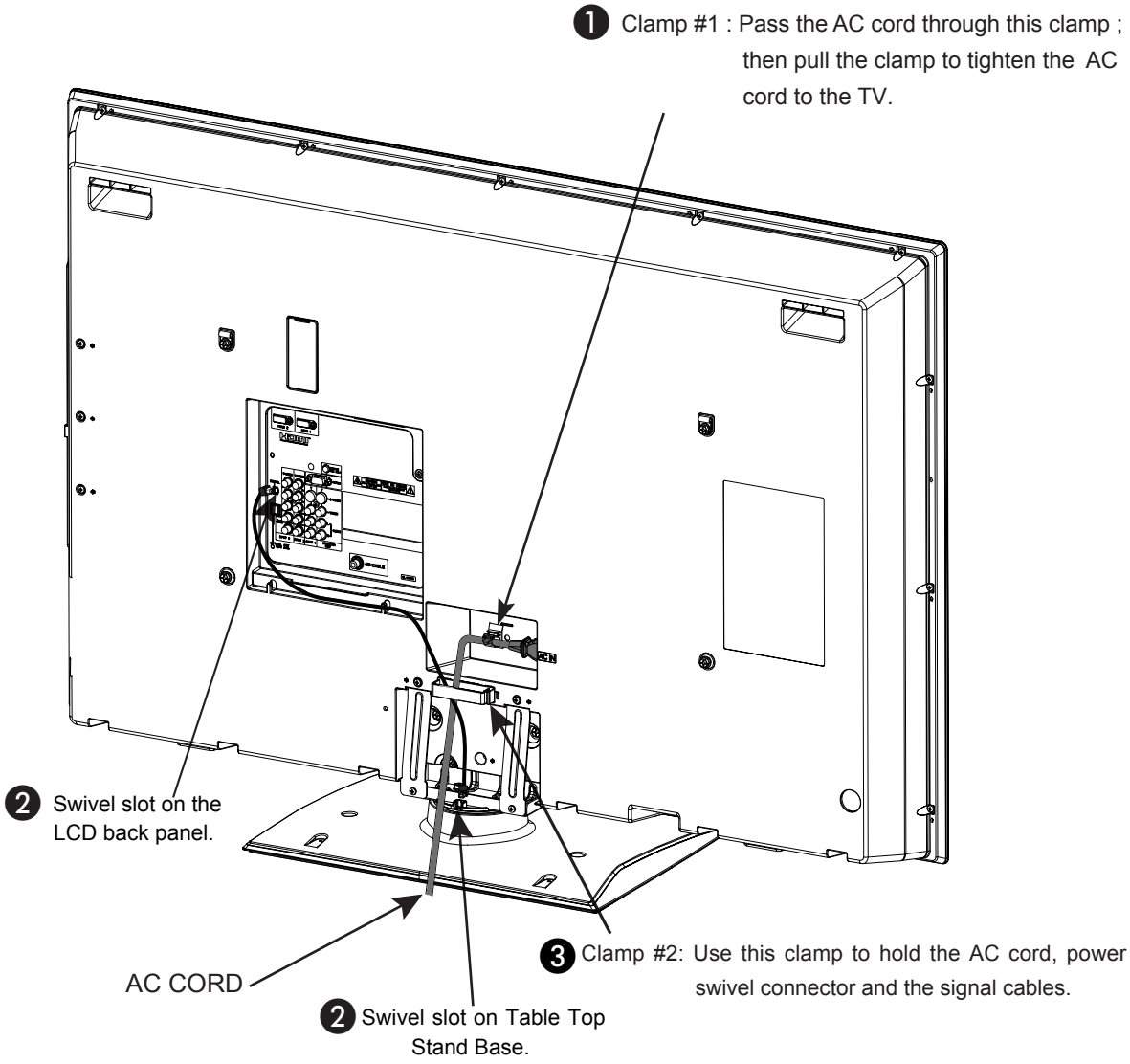
AC CORD AND POWER SWIVEL CABLE INSTALLATION INSTRUCTION

The AC cord and power swivel cable provided with your new LCD Flat Panel Television need to be installed correctly to avoid their disconnection when rotating the TV on its Table top stand.
Located on the back of the TV are 2 plastic clamps to hold the AC cord and power swivel cable. Please follow the instructions below.

❶ Pass the AC cord through Clamp #1 and connect it to the TV. Pull on the clamp to tighten the AC cord to the TV.

❷ Connect power swivel cable on one end to the swivel slot of the LCD Rear Panel. Connect the other end to the swivel slot of the Table Top Stand Base.

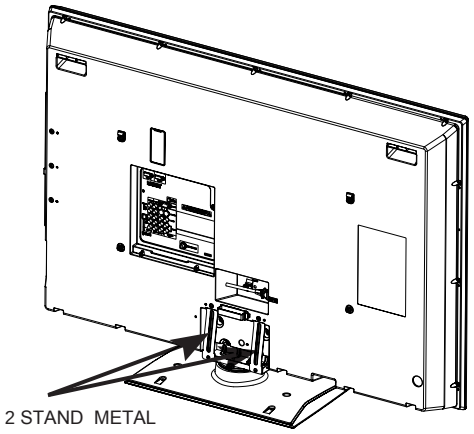
❸ The AC cord, power swivel cable and the signal cables can all be held together with Clamp #2.

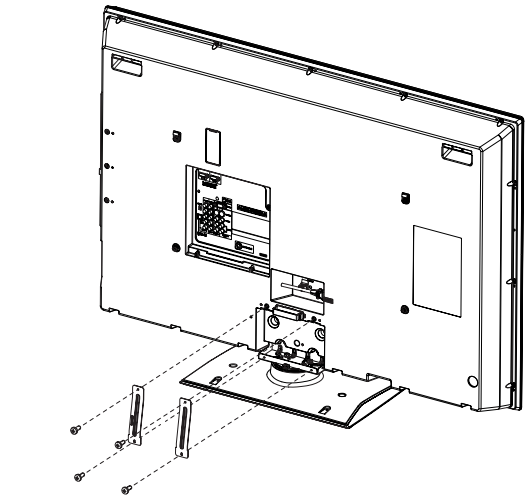


How to set up your new HITACHI LCD Television

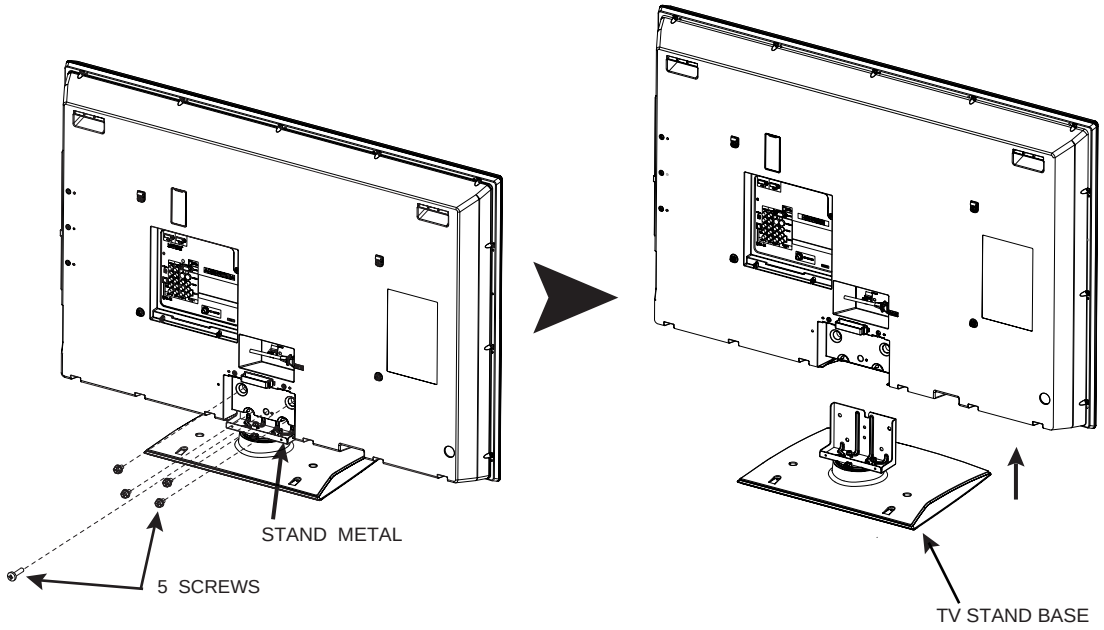
SETTING FOR WALL MOUNTING

STEP (1) :
Please locate the STAND METAL SUPPORTS on the back of the TV . These metals is use to hold the TV and the Base ; so it needs to remove 4 screws from the STAND METAL in order to separate the TV from the Base.





STEP (2):
Now please remove the 5 screws of the STAND metal from the TV, now the TV STAND can be separated from the TV.



For Model L47S601 & L47V651

CAUTION- *This LCD Flat Panel for use only with Hitachi* ***WM07S*** *Wall Mount. Use with other Wall Mount is capable of resulting in instability causing possible injury.*

NOTE: *Use the specified WALL MOUNT unit for the LCD TV depending on the size of your TV. Please access our web site at:* ***www.hitachi.us/tv (US)*** *or* ***www.hitachi.ca/tv (CAN)*** *for recommended accessories for your TV.*

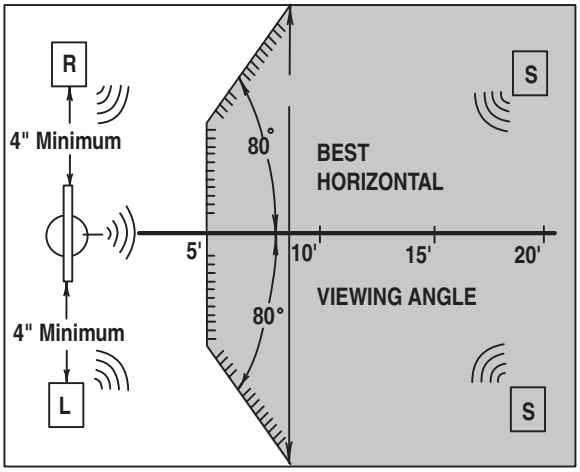
How to set up your new HITACHI LCD Television

VIEWING

The best picture is seen by sitting directly in front of the TV and about 10 to 18 feet from the screen.

During daylight hours, reflections from outside light may appear on the screen. If so, drapes or screens can be used to reduce the reflection or the TV can be located in a different section of the room.

If the TV's audio output will be connected to a Hi-Fi system's external speakers, the best audio performance will be obtained by placing the speakers equidistant from each side of the receiver cabinet and as close as possible to the height of the picture screen center. For best stereo separation, place the external speakers at least four feet from the side of the TV, place the surround speakers to the side or behind the viewing area. Differences in room sizes and acoustical environments will require some experimentation with speaker placement for best performance.



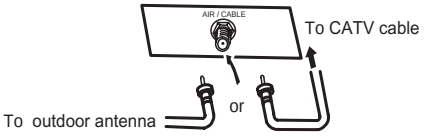
ANTENNA CONNECTIONS TO REAR JACK PANEL

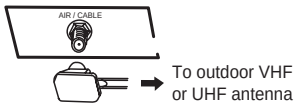
VHF (75-Ohm) antenna/CATV (Cable TV)

When using a 75-Ohm coaxial cable system, connect **CATV** coaxial cable to the AIR/CABLE (75-Ohm) terminal. Or if you have an antenna, connect the coaxial cable to the same AIR/CABLE terminal.

VHF (300-Ohm) antenna/UHF antenna

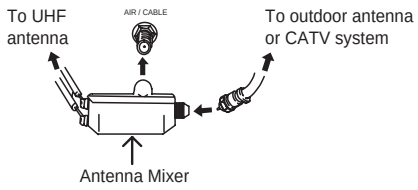
When using a 300-Ohm twin lead from an outdoor antenna, connect the **VHF** or **UHF** antenna leads to screws of the **VHF** or **UHF** adapter. Plug the adapter into the antenna terminal on the TV.





When both VHF and UHF antennas are connected

Attach an optional antenna cable mixer to the TV antenna terminal, and connect the cables to the antenna mixer. Consult your dealer or service store for the antenna mixer.

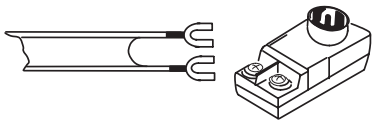


NOTE: *Connecting a 300-Ohm twin lead connector may cause interference. Using a 75-Ohm coaxial cable is recommended.*

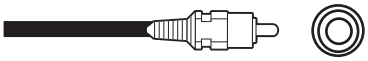
Hook-up Cables and Connectors

Most video/audio connections between components can be made with shielded video and audio cables that have phono connectors. For best performance, video cables should use 75-Ohm coaxial shielded wire. Cables can be purchased from most stores that sell audio/video products. Below are illustrations and names of common connectors. Before purchasing any cables, be sure of the output and input connector types required by the various components and the length of each cable.

300-Ohm Twin Lead Cable
This outdoor antenna cable must be connected to an antenna adapter (300-Ohm to 75-Ohm).

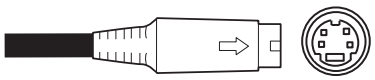


Phono or RCA Cable
Used on all standard video and audio cables which connect to inputs and outputs located on the television's rear jack panel and side control panel.

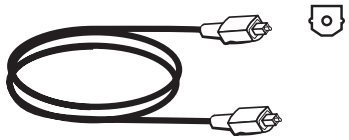


"F" Type 75-Ohm Coaxial Antenna
For connecting RF signals (antenna or cable TV) to the antenna jack on the television.

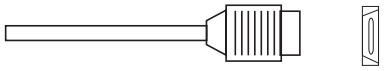
S-Video (Super Video) Cable
This connector is used on camcorders, VCRs and laser-disc players with an S-Video feature in place of the standard video cable to produce a high quality picture.



Optical Cable
This cable is used to connect to an audio amplifier with an Optical Audio In jack. Use this cable for the best sound quality.



HDMI Cable
This cable is used to connect your external devices such as Set-Top-Boxes or DVD players equipped with an **HDMI** output connection to the TV's **HDMI** input.

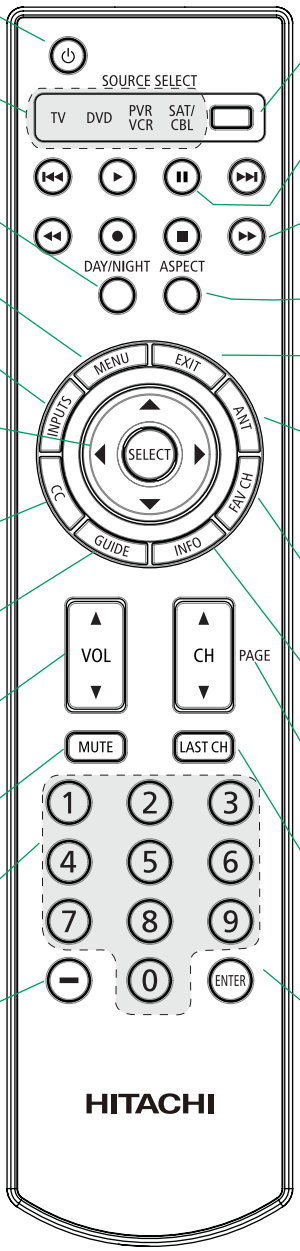


Stereo Cable (3.8mm plug to 3.5mm plug)
Used on all standard video and audio cable which connect to inputs and outputs located on the rear jack panel and side control panel.

Power Swivel Cable (Provided)
This cable is used to connect the swivel stand to the rear panel of the LCD Television.

Quick Reference Remote Control Buttons and Functions

In addition to controlling all of the functions on your HITACHI LCD TV, the new remote control is designed to operate different types of devices, such as, DVD Players, CBL (Cable Boxes), set-top-boxes, satellite receivers, and VCRs. The remote control must be programmed to control the chosen device.



POWER BUTTON (TV, DVD, SAT/CBL,PVR/VCR)
Turns the selected device on and off.

MODE INDICATOR
Turns on or blinks to show remote control mode when the SOURCE ACCESS buttons are pressed.

DAY/NIGHT BUTTON (TV)
Toggles picture mode settings between DAY and NIGHT mode.

MENU BUTTON (TV,DVD,SAT/CBL,PVR/VCR)
Accesses the OSD menu system.

INPUTS BUTTON (TV)
Accesses the INPUTS menu system.

CURSOR PAD/SELECT BUTTON (TV, DVD, SAT/CBL,PVR/VCR)
The Cursor Pad is used as a cursor to navigate through the OSD and INPUT menu systems. The Select button is used to Select/Activate highlighted menu items.

Closed Caption (CC) BUTTON (TV)
Press to show and change the Closed Caption mode.

GUIDE BUTTON (SAT/CBL, PVR)
Accesses the program guide of other devices.

VOLUME BUTTONS (TV)
Increase up and decrease down to adjust the audio level of your TV.

MUTE BUTTON (TV)
Reduces the audio level to 50% if pressed once, and to complete mute if pressed twice. Press it a third time to restore audio level.

NUMERIC BUTTONS (TV, DVD, SAT/CBL, PVR/VCR)
Used to manually enter the TV channel, and used for numeric entry when navigating through the the OSD, INPUTS.

(-) BUTTON (TV,STB)
The (-) button is used when the remote is in Set-Top-Box (STB) mode or when the TV uses a digital input.

SOURCE ACCESS BUTTONS (TV, DVD, PVR/VCR, SAT/CBL)
Changes the mode of the Universal Remote Control to control the device selected.

PAUSE BUTTON (TV,PVR/VCR, DVD)
Press to pause other devices when the remote is in DVD, PVR/VCR mode or to show and change the Frezze mode of the TV(L47V651 Only).

DVD/VCR CONTROL BUTTONS (DVD, PVR/VCR)
Controls the functions of your VCR and DVD.

ASPECT BUTTON (TV)
Changes the aspect ratio of the TV.

EXIT BUTTON (TV, SAT/CBL, PVR/VCR)
Exits out of the OSD, INPUTS menu systems if their menu is displayed.

ANT (Antenna) BUTTON-L47S601 (TV)
Press for change to antenna input.

PIP CONTROL BUTTON in L47V651 (TV)
Press to show and change the Picture-in-Picture mode.

FAVORITE CHANNEL (FAV CH) button (TV)
Press to enter/access Favorite Channel (FAV CH) mode. (Favorite channel is only available for TV mode.)

INFO BUTTON (TV, STB, CBL, PVR)
Displays various information on the screen, such as channel information.

CHANNEL UP & DOWN BUTTONS (TV, CBL, STB, PVR/VCR)
Changes up or down the channel.

LAST CHANNEL BUTTON (TV, SAT/CBL, PVR)
Switches between the current and last channel viewed.

ENTER BUTTON (TV, VCR, SAT/CBL)
Press to use as SELECT feature.

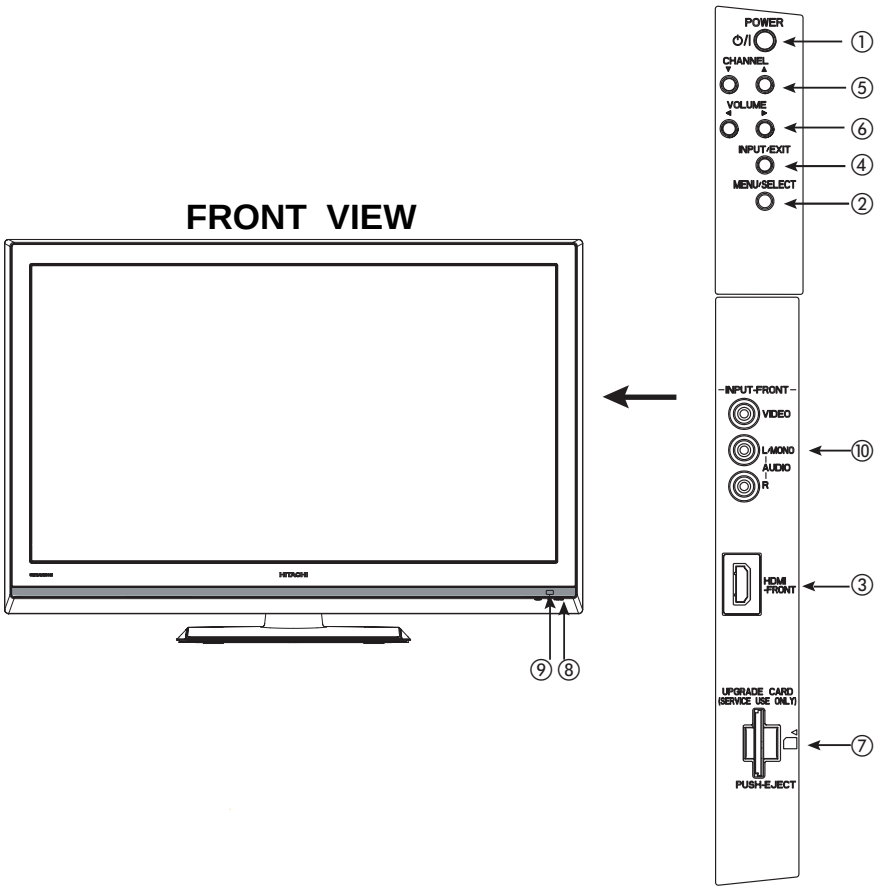
LEGEND

TV – Television
CBL – Cable Box
SAT – Satellite
PVR – Video Recorder/Player
DVD – Digital Video Disc Player
VCR – Videocassete Recorder

NOTES: *1. The TV's remote control sensor is located on the right bottom portion of the TV screen. To control TV functions, please point the remote control directly at the remote control sensor for best results.*

2. VCR precode is included in the PVR mode.

Side Panel Controls



① SIDE POWER button

Press this button to turn the LCD Television ON/OFF. It can also be turned ON/OFF by remote control. The "MAIN POWER" can only be turn OFF by unplugging the power cord from the outlet.

After this button is pressed to turn ON the set, the function of this button will not be available for a short period of time until the picture appears on the TV screen.

NOTE: When the TV is unplugged, the clock will stop and may eventually reset itself.

② **MENU/SELECT button**

This button allows you to enter the MENU, making it possible to set TV features to your preference without using the remote. This button also serves as the SELECT button when in MENU mode.

③ HDMI-FRONT

Use the side HDMI input for external devices such as Set-Top-Boxes or DVD players equipped with an HDMI output connection.

④ **INPUT/EXIT button**

Press this button to access the INPUT menu. Press again to exit the MENU mode.

⑤ **CHANNEL selector**

Press these buttons until the desired channel appears in the top right corner of the TV screen. These buttons also serve as the cursor down (▼) and up (▲) buttons when in MENU mode.

⑥ **VOLUME level**

Press these buttons to adjust the sound level. The volume level will be displayed on the TV screen. These buttons also serve as the cursor left (◄) and right (►) buttons when in MENU mode.

⑦ Upgrade Card

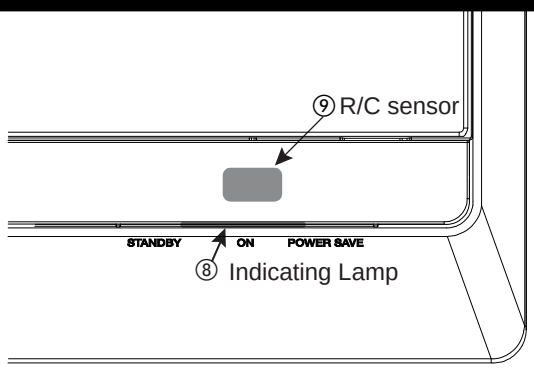
This card slot is for future software upgrades. Hitachi will notify you if a software upgrade is required for your TV. In order to receive written notification, please complete and return your warranty card.

⑦ SD CARD PHOTO INPUT (L47V651 only)

To view digital still pictures, please insert an SD/MMC card in to the card slot with pictures taken on a Digital camera, to view them on the TV screen.

Side Panel Controls

⑧ **POWER light indicator**
To turn the TV ON, press the power button located on the right side of the TV set. A red stand-by indicator lamp located on the lower right corner of the front bezel is illuminated. The LCD TV is now ready for remote ON/OFF operation.



Indicating Lamp	Power Status	Operating
Off	OFF.	When the TV set is unplugged from AC line.
Lights Red	OFF. (Stand-by)	When the TV set is plugged to the AC line.
Lights Blue	On	TV POWER is ON ; picture is shown.
Lights Orange	Off (Power Saving)	TV POWER is ON with no signal input except antenna (no sync. signal).
Blinking Blue	On	When TV receives the IR signal from R/C.

⑨ **REMOTE CONTROL sensor**
Point your remote at this area when selecting channels, adjusting volume, etc.

⑩ **INPUT- FRONT JACKS**
INPUT- FRONT provide composite Video jacks for connecting equipment with this capability, such as a DVD player or Camcorders.

NOTES:
1. ***Your HITACHI LCD TV will appear to be turned OFF (lights orange) if there is no video input when INPUT : 1, 2, 3, Front and HDMI 1, 2 , Front. Check the Power Light to make sure the TV is turned off or in Stand-by mode (lights red) when not in use.***
2. ***Remote Control can not turn ON/OFF the "MAIN POWER" of the TV.***

Rear Panel Connections

① **Antenna Input**
To switch between Cable and Air input, go to the Channel Manager option to change the signal source CABLE or AIR.

② **Audio/Video Inputs 1, 2 and 3**
By using the INPUTS button, the CURSOR PAD (▲ and ▼), and the SELECT button or CURSOR PAD ► of the remote control, you can select each video source. Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, DVD players etc. (if you have mono sound, insert the audio cable into the left audio jack).

③ **MONITOR OUT & AUDIO OUT**
These jacks provide fixed audio and video signals (CABLE/AIR or INPUTS) which are used for recording. Use the S-VIDEO output for high quality video output. Component signal to Input 2 and 3, and HDMI inputs will not have monitor output.

④ **Optical Out (Digital Audio)**
This jack provides Digital Audio Output for your audio device that is Dolby® Digital and PCM compatible, such as an audio amplifier.

NOTE: **Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.*

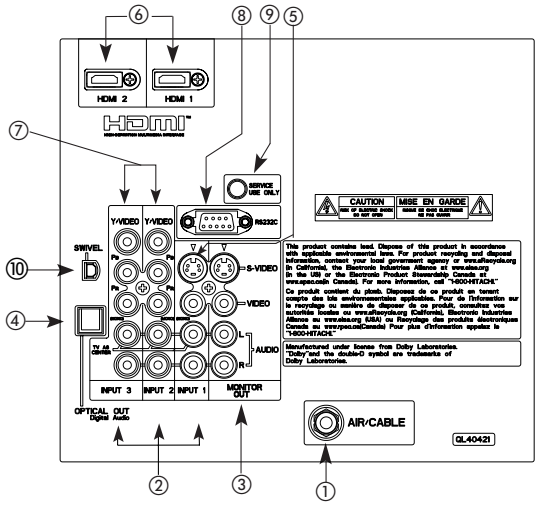
⑤ **S-VIDEO Input 1**
Input 1 provide S-VIDEO (Super Video) jacks for connecting equipment with S-VIDEO output capability.

NOTE: *1. You may use VIDEO or S-VIDEO inputs to connect to INPUT 1 , but only one of these inputs may be used at a time.*
2. S-VIDEO output may be used for recording, only when the input is of S-VIDEO type.

⑥ **HDMI 1, 2 (High Definition Multimedia Interface)**
ABOUT HDMI – HDMI is the next-generation all digital interface for consumer electronics. **HDMI** enables the secure distribution of uncompressed high-definition video and multi-channel audio in a single cable. Because digital television (DTV) signals remain in digital format, **HDMI** assures that pristine high-definition images retain the highest video quality from the source all the way to your television screen.

Use the **HDMI** input for your external devices such as Set-Top-Boxes or DVD players equipped with an **HDMI** output connection.

***HDMI**, the **HDMI** logo and High-Definition Multimedia Interface are trademarks or registered trademarks of **HDMI** Licensing LLC.*



NOTE: *1. The HDMI input is not intended for use with personal computers.*
2. Only DTV formats such as 1080p, 1080i, 720p, 480i and 480p are available for HDMI input.

⑦ **Component: Y-PBPR Inputs**
INPUTS 2 and **3** provide Y-PBPR jacks for connecting equipment with this capability, such as a DVD player or Set Top Box. You may use composite video signal for both inputs.

NOTE: *1. Do not connect composite VIDEO and S-VIDEO to INPUT 1 at the same time. S-VIDEO has priority over VIDEO input.*
2. Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's P_B input and the components R-Y output to the TV's P_R input.
3. Your component outputs may be labeled Y-CBCR. In this case, connect the component CB output to the TV's P_B input and the component CR output to the TV's PR input.
4. It may be necessary to adjust TINT to obtain optimum picture quality when using the Y-P_BP_R inputs.
5. To ensure no copyright infringement, the MONITOR OUT output will be abnormal, when using the Y-P_BP_R jacks and HDMI Input.
6. INPUT 2 , and 3 (Y/VIDEO) can be used for composite video and component video input.

⑧ **For Special AV control use only.**

⑨ **For Factory use only.**

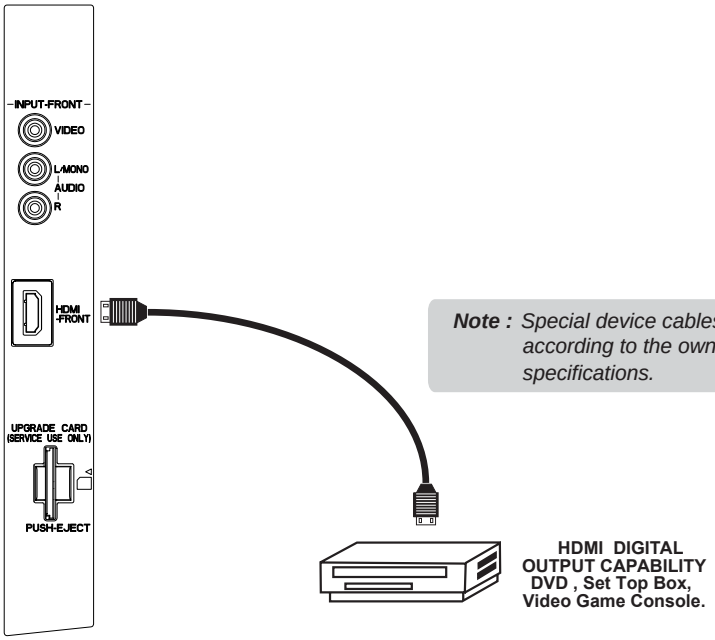
⑩ **Power Swivel Connector**
Connect from here the Power Swivel cable (provided) to the Table Top Stand Base swivel slot.

Connecting External Video Sources

The SIDE panel jacks are provided as a convenience to allow you to easily connect HDMI or DVI signals from a DVD, Set Top Box , Video Game as shown in the following examples (When connecting DVI signal it will need to connect the audio output into the side Audio Input jacks) :

A) Connecting HDMI signal.

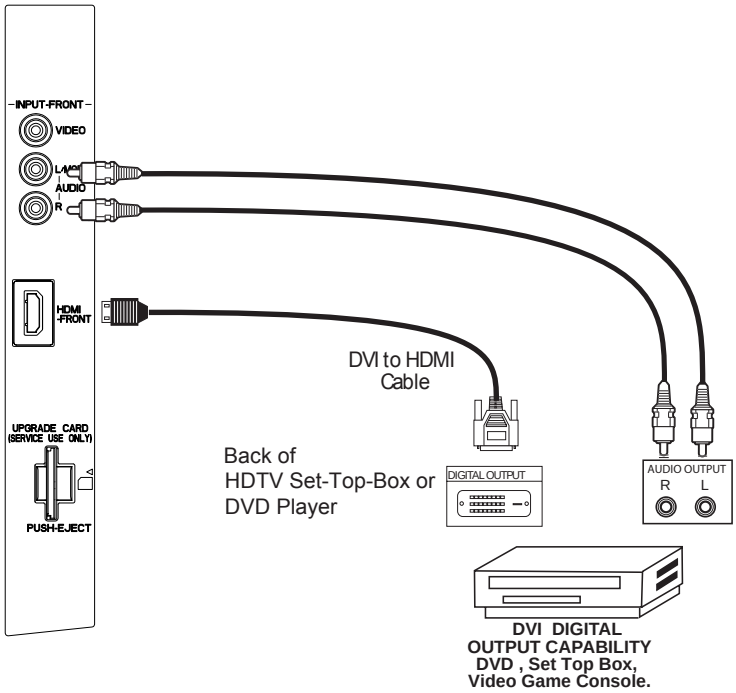
SIDE INPUT PANEL



Note : *Special device cables will be according to the own device specifications.*

B) Connecting DVI signal.

SIDE INPUT PANEL



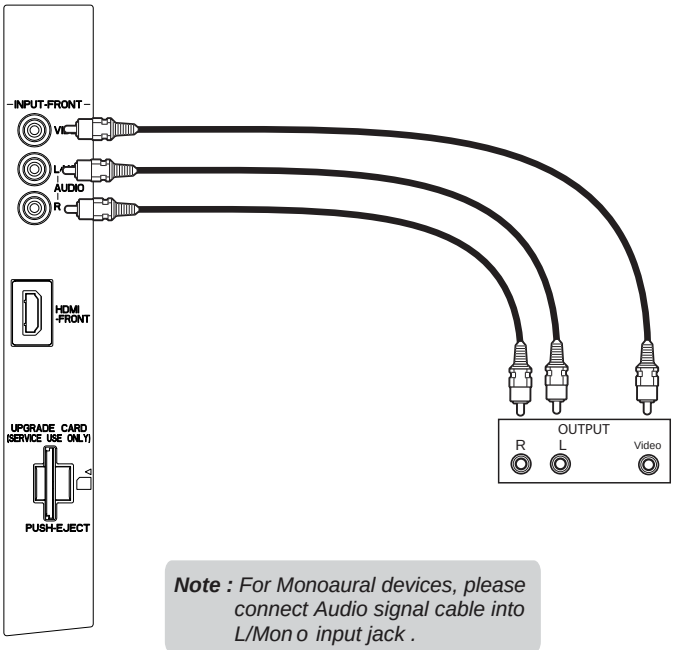
Note : *Special device cables will be according to the own device specifications.*

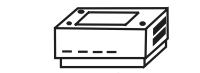
NOTE: 1. Completely insert connection cord plugs when connecting to side panel jacks. If you do not, the played back picture may be abnormal.

Connecting External Video Sources

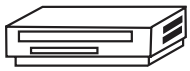
The SIDE panel jacks are provided as a convenience to allow you to easily connect a camcorder , DVD, Video Game and a VCR as shown in the following examples:

SIDE INPUT PANEL

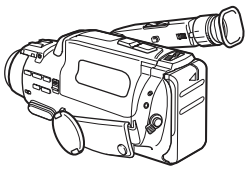




Video Game



COMPOSITE VIDEO OUTPUT CAPABILITY DVD , Video Game Console.



Video Camera

Note : *For Monoaural devices, please connect Audio signal cable into L/Mon o input jack .*

Note : *Special device cables will be according to the own device specifications.*

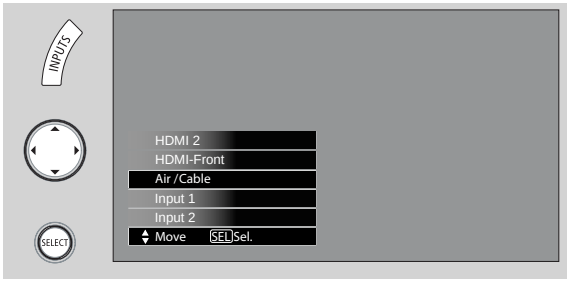
NOTE:1. Completely insert connection cord plugs when connecting to side panel jacks. If you do not, the played back picture may be abnormal.

The exact arrangement you use to connect the VCR, camcorder, laserdisc player, DVD player, or HDTVSet Top Box to your LCD TV is dependent on the model and features of each component. Check the owner's manual of each component for the location of video and audio inputs and outputs.

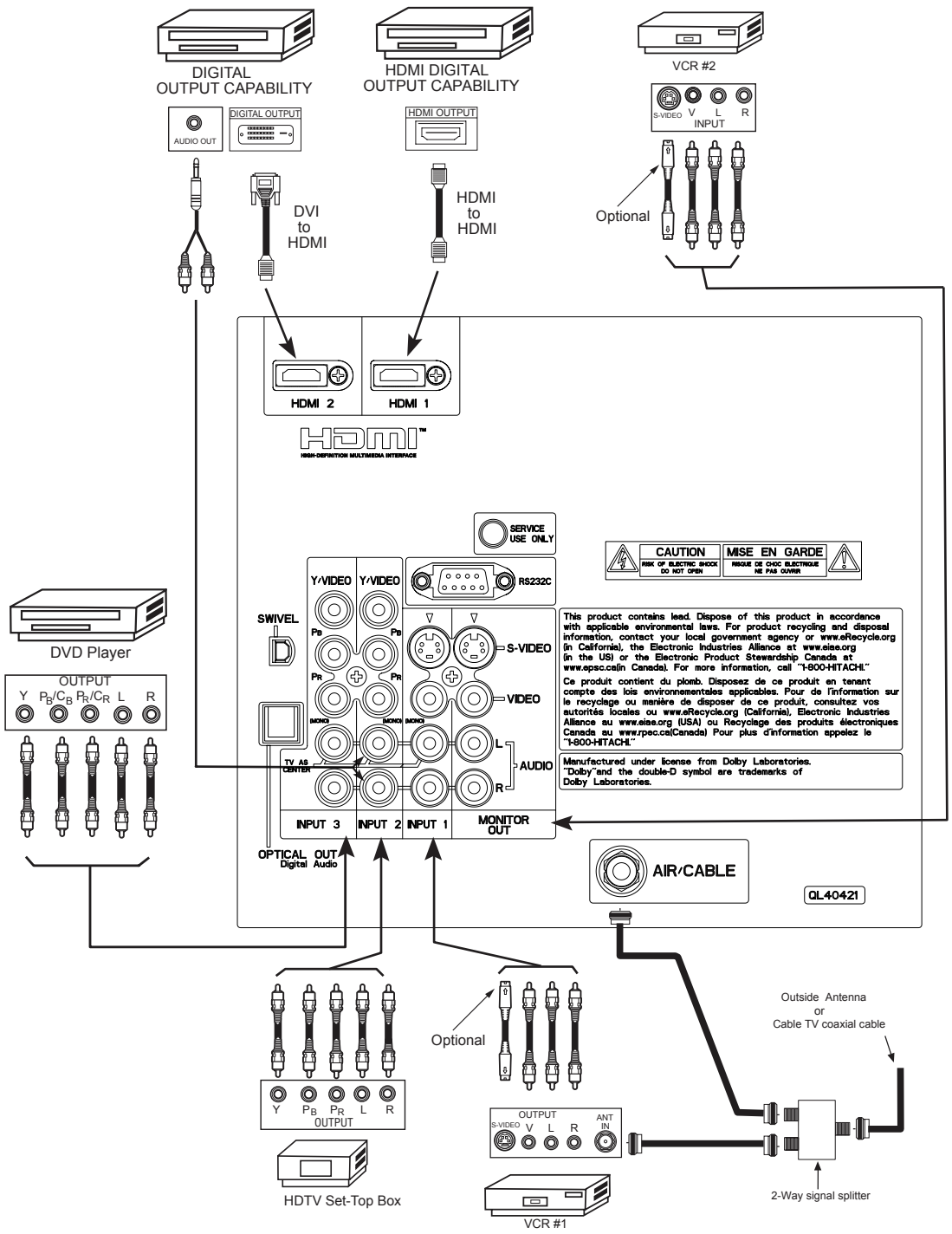
The following connection diagrams are offered as suggestions. However, you may need to modify them to accommodate your particular assortment of components and features. For best performance, video and audio cables should be made from coaxial shielded wire.

Before Operating External Video Source

Connect an external source to one of the INPUT terminals, then press the INPUTS button to show the INPUTS menu. Use the CURSOR PAD (▲ and ▼) to select the Input of your choice. Then press the SELECT button or the CURSOR PAD ► to confirm your choice.



Rear Panel Connections



NOTE: *Cables are optional, except when specified.*

Tips on Rear Panel Connections

- S-VIDEO, Y-PBPR, or HDMI connections are provided for high performance laserdisc players, VCRs etc. that have this feature. Use these connections in place of the standard video connection if your device has this feature.
- If your device has only one audio output (mono sound), connect it to the left audio jack on (L/(MONO)) the Rear Panel.
- Refer to the operating guide of your other electronic equipment for additional information on connecting your hook-up cables.
- A single VCR can be used for VCR #1 and VCR #2, but note that a VCR cannot record its own video or line output. Refer to your VCR operating guide for more information on line input-output connections.
- Connect only 1 component (VCR, DVD player, camcorder, etc.) to each input jack.
- COMPONENT: Y-P_BP_R (Input 2 & 3) connections are provided for high performance components, such as DVD players and set-top-boxes. Use these connections in place of the standard video connection if your device has this feature.
- Your component outputs may be labeled Y, B-Y, and R-Y. In this case, connect the components B-Y output to the TV's P_B input and the components R-Y output to the TV's P_R input.
- Your component outputs may be labeled Y-C_BC_R. In this case, connect the components C_B output to the TV's P_B input and the components C_R output to the TV's P_R input.
- It may be necessary to adjust TINT to obtain optimum picture quality when using the Y-P_BP_R inputs.
- To ensure no copyright infringement, the MONITOR OUT output will be abnormal, when using the Y-PBPR and HDMI input jacks.
- Input HDMI 1, HDMI 2 or HDMI FRONT can accept HDMI signal.
- S-VIDEO monitor output may be used for recording only when the input is of S-VIDEO type.
- When using a HDMI input from a Set-Top-Box, it is recommended to use a 1080p, 1080i or 720p input signal.
- When HDMI input a 1080p signal, it is recommended that the length of the cable be less than 5 meters.

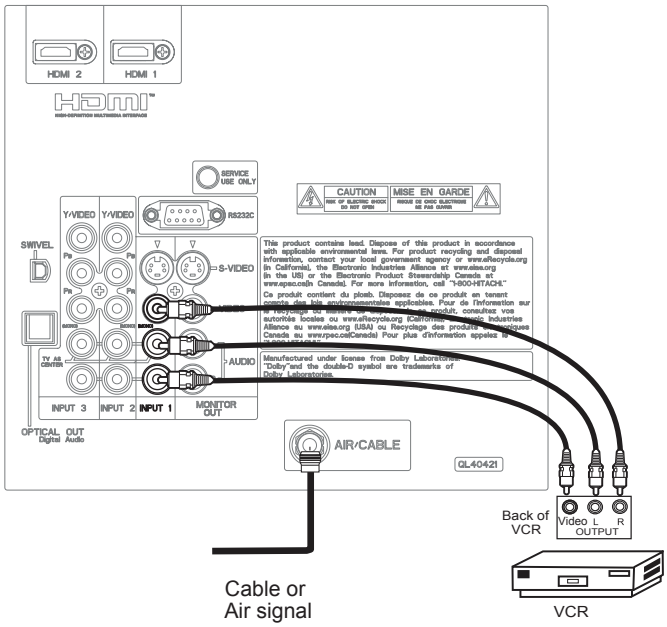
INSTALLATION RECOMMENDATION:

1. ***Video signals fed through a VCR may be affected by copyright protection systems and the picture will be distorted on the television.***
2. ***Connecting the television directly to the Audio/Video output of a Set-Top-Box will assure a more normal picture.***

Connecting External Video Sources

CONNECTING A VIDEO AND STEREO AUDIO SOURCE TO INPUT1 ~ INPUT-FRONT

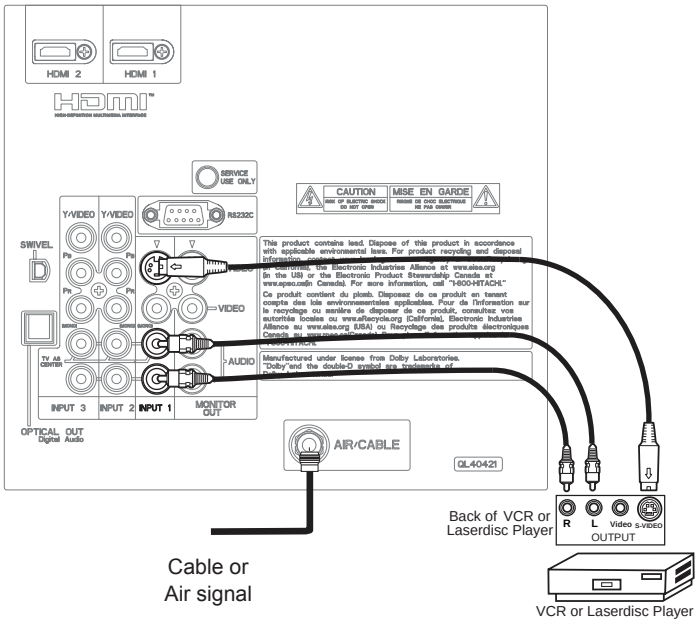
1. Connect the cable from the VIDEO OUT of the VCR or the laserdisc player to the INPUT (VIDEO) jack, as shown on the Rear Panel to the right.
2. Connect the cable from the AUDIO OUT R of the VCR or the laserdisc player to the INPUT (AUDIO/R) jack.
3. Connect the cable from the AUDIO OUT L of the VCR or the laserdisc player to the INPUT (AUDIO/L) jack.
4. Press the INPUTS button, then select INPUT 1 2,3 or Front from the INPUTS menu to view the program from the VCR or laserdisc player.
5. Select CABLE or AIR from the INPUTS menu or ANT key from the R/C to return to the last channel tuned.



NOTE: *1. Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
2. A single VCR can be used for VCR #1 and VCR #2 but note that a VCR cannot record its own video or line output. Refer to your VCR operating guide for more information on line input-output connections.
3. When INPUT 2 or 3 are used, it is necessary to connect the video output of the device to the Y/VIDEO input jack of the TV .

CONNECTING AN S-VIDEO AND STEREO AUDIO SOURCE TO INPUT 1

1. Connect the cable from the S-VIDEO OUT of the S-VHS VCR or the laserdisc player to the INPUT (S-VIDEO) jack, as shown on the Rear Panel to the right.
2. Connect the cable from the AUDIO OUT R of the VCR or the laserdisc player to the INPUT (AUDIO/R) jack.
3. Connect the cable from the AUDIO OUT L of the VCR or the laserdisc player to the INPUT (AUDIO/L) jack.
4. Press the INPUTS button, then select INPUT 1 from the INPUTS menu to view the program from the VCR or laserdisc player.
5. Select CABLE or AIR from the INPUTS menu or ANT key from the R/C to return to the last channel tuned.



NOTE: *1. Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
2. A single VCR can be used for VCR #1 and VCR #2, but note that a VCR cannot record its own video or line output. Refer to your VCR operating guide for more information on line input-output connections.

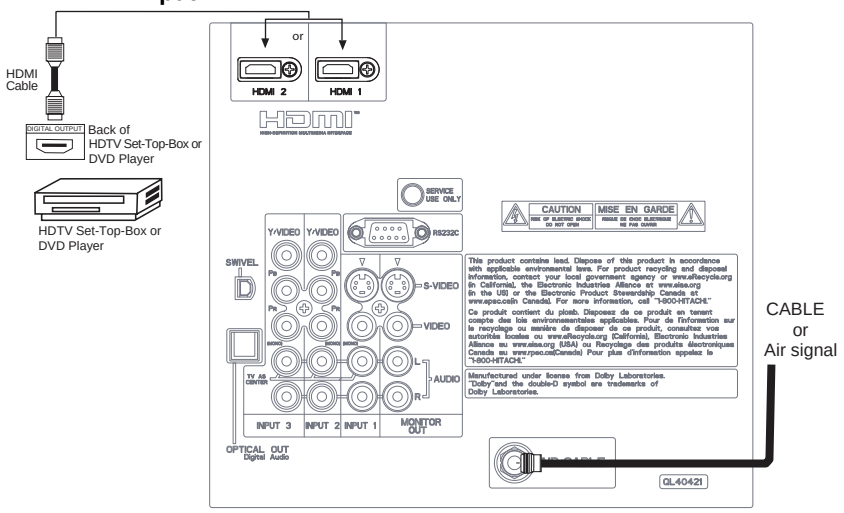
Connecting External Video Sources

CONNECTING A COMPONENT SOURCE WITH HDMI OR DVI CAPABILITY TO HDMI 1, HDMI 2 OR HDMI FRONT

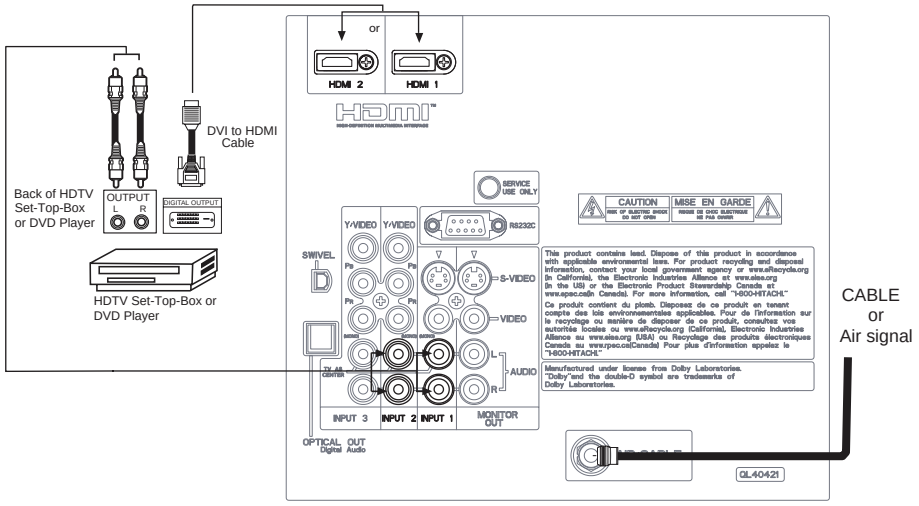
1. Connect the HDMI or DVI to HDMI connection cable from the output of the HDTV set top box or DVD player to the HDMI input as shown on the Rear panel below.
2. With DVI output, connect the cable from the AUDIO OUT R of the HDTV set top box or DVD player to the INPUT (AUDIO/R) jack as shown on the Rear Panel below.
3. With DVI output, connect the cable from the AUDIO OUT L of the HDTV set top box or DVD player to the INPUT (AUDIO/L) jack as shown on the Rear Panel below.
4. Press the INPUTS button, then select HDMI 1, 2 or FRONT to view the program from the HDTV SET TOP BOX or DVD player.
5. Select CABLE or AIR from the INPUTS menu or ANT key from the R/C to return to the last channel viewed.

NOTE: *1. Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*
2. The HDMI input on HDMI 1 , 2 and FRONT contains the copy protection system called High-bandwidth Digital Content Protection (HDCP). HDCP is a cryptographic system that encrypts video signals when using HDMI connections to prevent illegal copying of video contents.
3. HDMI is not a "NETWORK" technology. It establishes a one-way point-to-point connection for delivery of uncompressed video to a display.
4. The connected digital output device controls the HDMI interface so proper set-up of device user settings determines final video appearance.
5. When using a DVI to HDMI cable, connect the Audio Out L and R cables at the same INPUT (1 , 2 or Front) as your HDMI INPUT(1 , 2 or Front).

HDMI input



DVI to HDMI Input

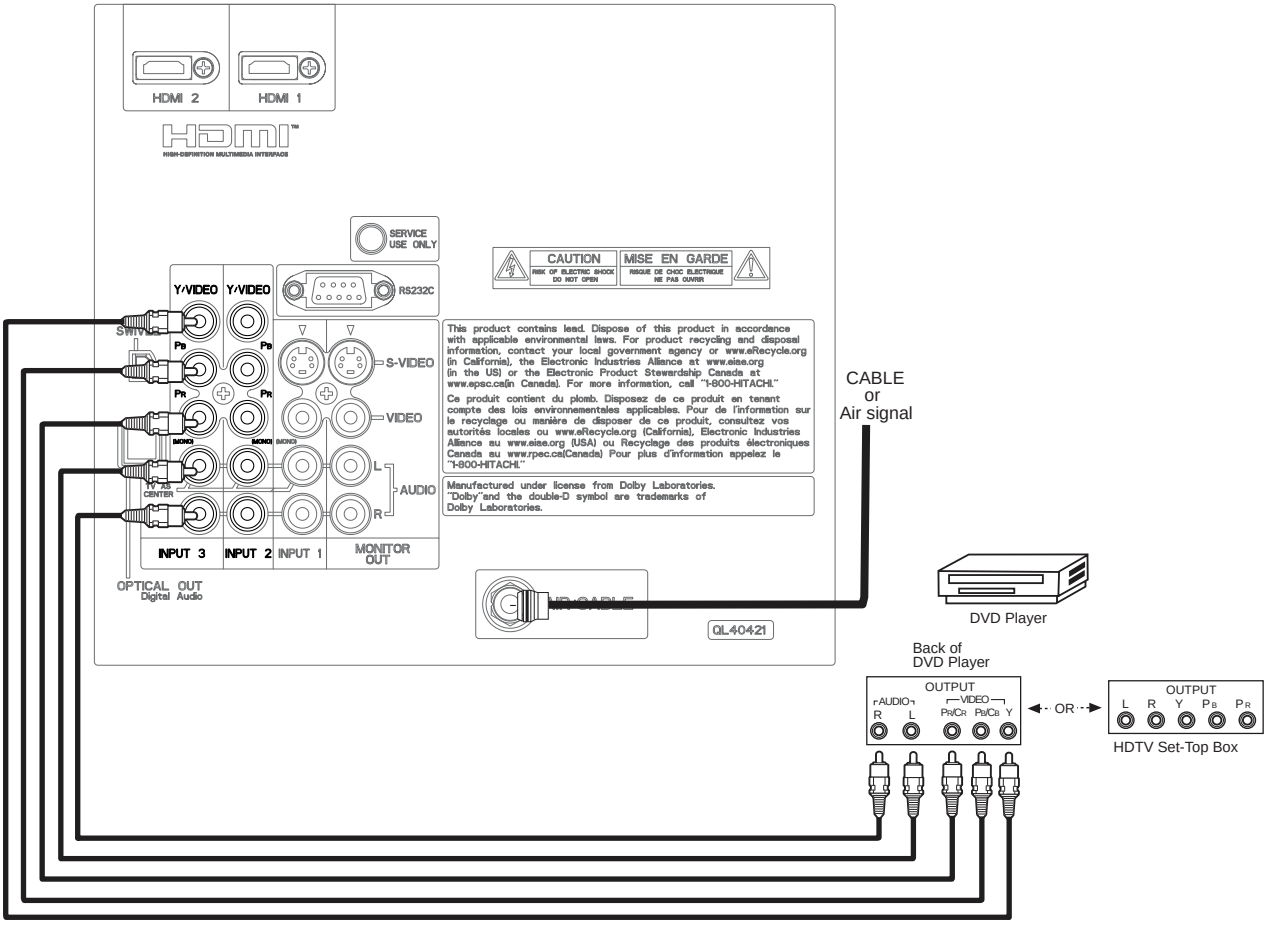


Connecting External Audio/Video Devices

CONNECTING A COMPONENT AND STEREO AUDIO SOURCE TO INPUT 2 or 3 : Y-PBPR.

1. Connect the cable from the Y OUT of the Laserdisc/DVD player or HDTV set top box to the INPUT (Y) jack, as shown on the Rear panel below.
2. Connect the cable from the P_B/C_B OUT or B-Y OUT of the Laserdisc/DVD player or HDTV set top box to the INPUT ($P_{B)}$ jack.
3. Connect the cable from the P_R/C_R OUT or R-Y OUT of the Laserdisc/DVD player or HDTV set top box to the INPUT (P_R) jack.
4. Connect the cable from the AUDIO OUT R of the Laserdisc/DVD player or HDTV set top box to the INPUT (AUDIO/R) jack.
5. Connect the cable from the AUDIO OUT L of the Laserdisc/DVD player or HDTV set top box to the INPUT (AUDIO/L) jack.
6. Press the INPUTS button, then select INPUT 2 or 3 from the INPUTS menu to view the program from the Laserdisc/DVD player or HDTV set top box.
7. Select CABLE, AIR or ANT key from the R/C to return to the last channel tuned.

NOTE: *1. Completely insert the connection cord plugs when connecting to rear panel jacks. The picture and sound that is played back will be abnormal if the connection is loose.*



Connecting External Audio/Video Devices

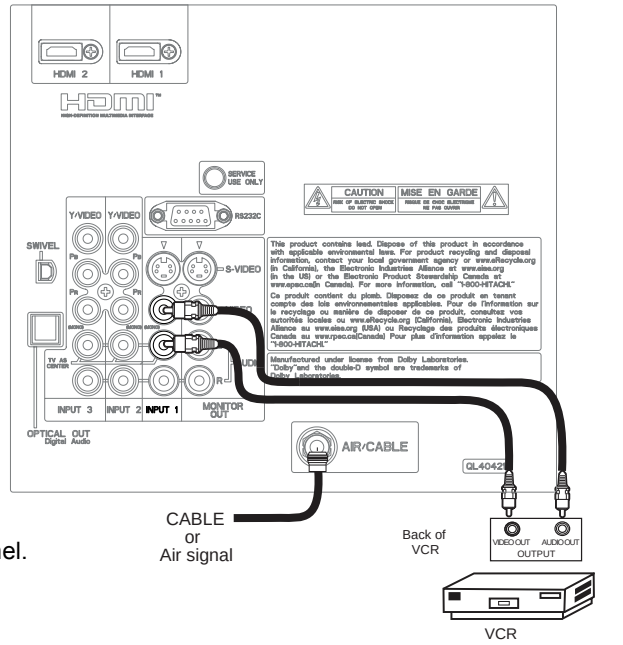
CONNECTING A VIDEO AND MONAURAL AUDIO SOURCE TO INPUT 1 ~ FRONT INPUT

1. Connect the cable from the VIDEO OUT of the VCR or the laserdisc player to the INPUT (VIDEO) jack, as shown on the Rear Panel on the right.

2. Connect the cable from the AUDIO OUT of the VCR or the laserdisc player to the INPUT (MONO)/L(AUDIO) jack.

3. Press the INPUTS button, then select INPUT 1 2,3 or Front from the INPUTS menu to view the program from the VCR or the laserdisc player.

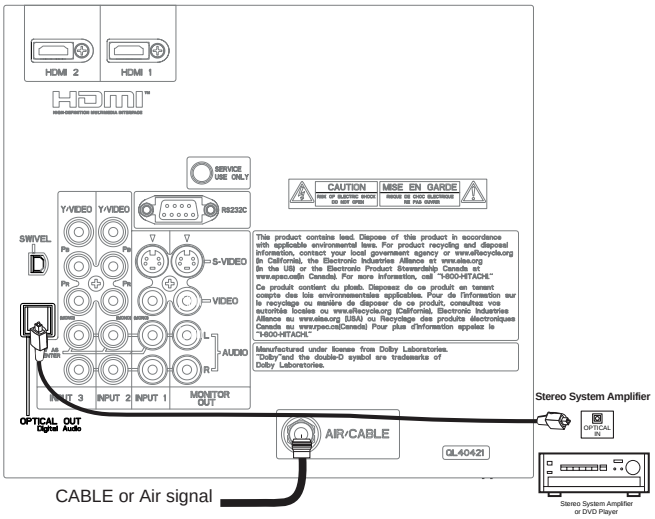
4. Select CABLE or AIR from the INPUTS menu or ANT key from the R/C to return to the previous channel.



CONNECTING AN EXTERNAL AUDIO AMPLIFIER

To monitor the audio level of the LCD TV to an external audio amplifier, connect the system as shown on the right. The “OPTICAL OUT” from the Rear Panel is a fixed output. The Volume of the amplifier is controlled by the amplifier, not by the LCD Television. The OPTICAL OUT terminal outputs all audio sources with Optical IN capability.

1. Connect an optical cable from the Optical out to the Optical input of a separate Stereo System Amplifier as shown on the Rear Panel on the right.



CONNECTING MONITOR OUT

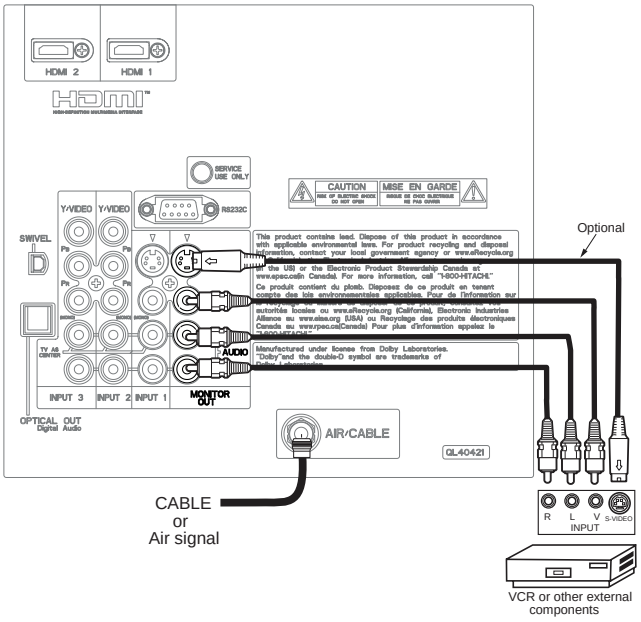
The MONITOR OUT terminal outputs video and audio of CABLE/AIR and INPUTS 1, 2, 3 and Front. It does not output component and HDMI video.

1. Connecting S-Video:
   Connect the cable from the S-VIDEO OUT of the Rear Panel to the INPUT (S-VIDEO) jack, of the VCR or Laserdisk player.

   Connecting Video:
   Connect the cable from the VIDEO INPUT of the VCR or the laserdisc player to the VIDEO out jack on the TV Rear Panel.

2. Connect the cable from the AUDIO IN R of the VCR or the laserdisc player to the OUTPUT (AUDIO/R) jack on the TV Rear Panel.

3. Connect the cable from the AUDIO IN L of the VCR or the laserdisc player to the OUTPUT (AUDIO/L) jack on the TV Rear Panel.



NOTE: *When making video connections, connect S-Video only or Video only. If both are connected, S-Video takes priority.*

TABLE OF CONTENTS OF ADJUSTMENTS

TO GO TO A SECTION, CLICK ON ITS HEADING BELOW.

1 ADJUSTMENT PROCEDURE START-UP

The L47S601 and the L47V651 LCD TV sets pass through adjustment procedures during the assembly process. These adjustments must be done to enssure the best performance of the LCD set for the consumer.

Also, after servicing, these same adjustments must be done. The adjustments are all made through the I²C bus by changing data in the Adjustment mode menu.

1.1 HOW TO GET TO THE ADJUSTMENT MODE

Chassis adjustment mode can be accessed by pressing the R/C keys MENU + MENU + 8 + SELECT to enter adjustment mode. For some parameters the only way to see them is by selecting the parameter number then press SELECT in order to see it; then DATA can be changed if other parameter needs to change then press ▼ key then repeat the same procedure.

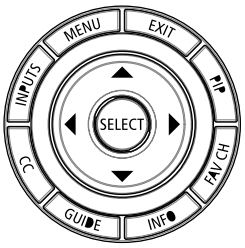
ADJUST MODE
FACT RESET
MEMORY INIT
RGB
WHITE BAL HIGH
WHITE BAL MED
WHITE BAL STD
WHITE BAL B/W

Other way to access this mode is by use JIG R/C code: (9C Hex). To escape from Adjustment Mode press “INPUT” key on Side panel or EXIT key of R/C to exit service adjustment mode.

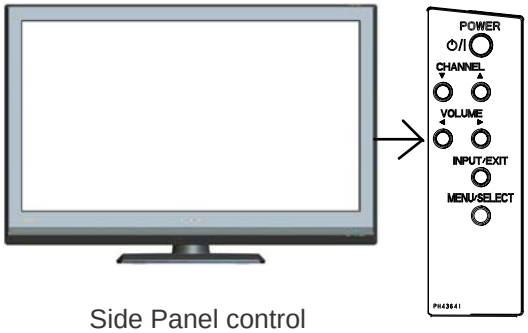
1.3 CHANGING DATA AND SELECTING ADJUSTMENT CODE

When the LCD set is in adjustment mode, the cursor ◀, ▶, ▲, ▼ and MENU keys of the remote control or side panel may be used as the adjustment keys.

A. Use any Hitachi remote control when making an adjustment.
▲, ▼ keys are used for selecting adjustment item.
◀, ▶ keys are used for changing data values.
MENU key is used to advance through the adjustment mode menus and pages.



Part of S and V models remote control keys.
*Note:PIP key(V Models), ANT key(S models)



Side Panel control

B. To make a selection, use the NUMBER pad on the LCD R/C ; example: select DEVICE press 69 then SELECT the DATA shown is "EB"; if this DATA needs to be changed press the ◀, ▶, keys to modify, when finish press SELECT key to store the new DATA value.
normal condition.

C. After finishing the necessary adjustment press the R/C EXIT key or EXIT key on the side panel.
Adjustment mode is released and LCD set returns to normal condition.

2 MEMORY INITIALIZE

2.1 MEMORY INITIALIZE OPERATION

NOTE: The execution of this function returns the adjustment codes to the preset values, therefore, **adjustment data will be lost**.

Procedure

(1) Enter Adjustment mode by the method described in sub-items 1.1 and 1.2 from item 1 (“Adjustment procedure start up”).
(2) Get to the second row of Adjust Mode by pressing R/C or side panel ▼ cursor key once.
(3) Select MEMORY INIT adjust code.
(4) Activate MEMORY INIT by pressing ▶ cursor key for more than 3 seconds.
(5) Check the following process for initialization operation.

BACK TO ADJUSTMENTS

2.1 Process of Memory Initialize operation.

① The screen is colored **blue** when MEMORY INIT start.

② The screen is colored **green** when MEMORY INIT finish normally.

③ The screen is colored **red** when MEMORY INIT finish abnormally.

(6) Do not unplug from AC outlet until this operation is complete and do not perform any key operation either, after this operation each factory setting and all adjust mode data should reset to delivery settings automatically.

(7) After Memory Initialize, the AC cord should be unplugged. Unplug and plug the AC cord and then all settings and data will be updated.

(8) When LCD turns ON , it will tune CH03 this is the complete operation of Memory Initialize process.

2.2 FACTORY AND SERVICE ADJUSTMENTS

The adjustment item that is affected by the memory initialize operation is shown below:

ITEM	MEMORY INITIALIZE	PROTECTION DATA	FACTORY RESET	MMC SOFTWARE UPGRADE	BECKHAM SOFTWARE UPGRADE
WHITE BALANCE ADJUSTMENT DATA	NOT INITIALIZED	INITIALIZED	NOT INITIALIZED	NOT INITIALIZED	INITIALIZED
SUB CONTRAST ADJUSTMENT DATA	NOT INITIALIZED	INITIALIZED	NOT INITIALIZED	NOT INITIALIZED	INITIALIZED
CLAMP OFFSET ADJUSTMENT DATA	NOT INITIALIZED	INITIALIZED	NOT INITIALIZED	NOT INITIALIZED	INITIALIZED
OTHER ADJUSTMENT MODE DATA	INITIALIZED	NOT INITIALIZED	NOT INITIALIZED	NOT INITIALIZED	INITIALIZED
FACTORY RESET	INITIALIZED	NOT INITIALIZED	INITIALIZED	NOT INITIALIZED	INITIALIZED

Note: Perform pre heat-run for more than 20 min. before adjusting.

3 Sub-Contrast Adjustment

Preparation for adjustment

(1) Pre-heat at least 2 min. before the adjustment.

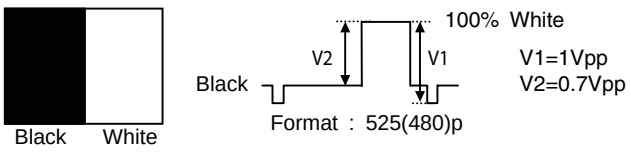
(2) Recall user menu and select 'Video'→ 'Picture Mode'→ 'Day(Dynamic)'→ 'Reset'.

(3) Receive following signal into input3 or input4(Comp) input.

Adjustment procedure

3.1 525p Sub-Contrast, Y/Cb/Cr Clamp offset adjustment

(1) Receive following 525(480)p Signal.



Adjustment signal for 525(480)p format

(2) Go into Service Adj. Menu and select 'RGB' .

(3) Press ▶ for over 2 seconds and the TV will do automatic adjustment. When it's completed, the OSD will appear, during adjustment, it will disappear.

BACK TO ADJUSTMENTS

4 WHITE BALANCE ADJUSTMENTS

General Notes for White Balance

(1) If the incident illumination is more than 20 lux, change the environment (location, lighting, etc.) and ensure it to be less than 20 lux.
(2) At least one of the color drive codes must stay at its default value, 110.

4.1 VIDEO COLOR TEMPERATURE ADJUSTMENT (HIGH)

Preparation 1

(1) Set the output of signal generator to white raster. (Ratio:100%)
(2) Component signal (480i)
Video level: 0.700Vp-p
SYNC: 0.300Vp-p
Set-up level: 0V
(3) Input white raster signal into COMPONENT input terminal of the LCD set.
(4) Set user control to Day(Dynamic) mode. (Picture Mode)
(5) Confirm that the mode is set as "Factory Setting Mode".
(6) Aspect: 4:3 Expanded
(7) Allow at least 20 minutes heat-run before adjusting.

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (non contact type: CA-210, BM-5, BM-7, CA-110) at the center of the panel.
(3) Set color temperature to "HIGH".
(4) Ensure that Adjustment R/G/B DRIVE (HIGH) are all set as 110.
(5) After receiving the White raster signal, reduce the value of two (or only one) of the adjustment parameters R/G/B DRIVE (HIGH) and adjust to the target value shown below.

Specification
Video Color temperature (HIGH)
x = 0.273 ± 0.005
y = 0.273 ± 0.005
(Color temp: 12000K-7MPCD)

At least one of the data should be 110.

Remarks

(1) Color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for adjustment is set to its maximum.
(2) Adjustment is made by reducing brightness only. Reduce a bright color for adjustment.
(3) Video color temperature & Adjustment no. are the same, but addresses in the memory are different, thus there's no problem.

4.2 VIDEO COLOR TEMPERATURE ADJUSTMENT (MEDIUM)

Preparation

(1) Same as "Video Color Temperature adjustment: (HIGH)".

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (non contact type: CA-210, BM-5, BM-7, CA-110) at the center of the panel.
(3) Set color temperature to "MEDIUM".
(4) Ensure that Adjustment R/G/B DRIVE (MEDIUM) are all set as 110.
(5) After receiving White raster signal, reduce the value of two (or only one) of the adjustment parameters R/G/B DRIVE (MEDIUM) and adjust to the target value shown below.

Specification
Video Color temperature (MED)
x = 0.285 ± 0.005
y = 0.293 ± 0.005
(Color temp: 9300K)

At least one of the data should be 110.

Remarks

(1) Color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for adjustment is set to its maximum.
(2) Adjustment is made by reducing brightness only. Reduce a bright color for adjustment.
(3) Video color temperature & Adjustment no. are the same, but addresses in the memory are different, thus there's no problem.

BACK TO ADJUSTMENTS

4.3 VIDEO COLOR TEMPERATURE ADJUSTMENT (STD)

Preparation

(1) Same as "Video Color Temperature adjustment: (HIGH)".

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (non contact type: CA-210, BM-5, BM-7, CA-110) at the center of the panel.
(3) Set color temperature to "STANDARD".
(4) Ensure that Adjustment R/G/B DRIVE (STD) are all set as 110.
(5) After receiving the White raster signal, reduce the value of two (or only one) of the adjustment parameters R/G/B DRIVE (STD) and adjust to the target value shown below.

Specification
Video Color temperature (STD)
x = 0.314 ± 0.005
y = 0.323 ± 0.005
(Color temp: 6500K)

At least one of the data should be 110.

Remarks

(1) Color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for adjustment is set to its maximum.
(2) Adjustment is made by reducing brightness only. Reduce a bright color for adjustment.
(3) Video color temperature & Adjustment no. are the same, but addresses in the memory are different, thus there's no problem.

4.4 VIDEO COLOR TEMPERATURE ADJUSTMENT (B/W)

Preparation

(1) Same as "Video Color Temperature adjustment: (HIGH)".

Adjustment

(1) Perform the following adjustment with the remote control.
(2) Set the CRT color analyzer (non contact type: CA-210, BM-5, BM-7, CA-110) at the center of the panel.
(3) Ensure that Adjustment R/G/B DRIVE (B/W) are all set as 110.
(4) After receiving the White Raster signal, reduce the value of two (or only one) of the adjustment parameters R/G/B DRIVE (B/W) and adjust to the target value shown below.

Specification
Video Color temperature (B/W)
x = 0.335 ± 0.005
y = 0.343 ± 0.005
(Color temp: 5400K)

At least one of the data should be 110.

Remarks

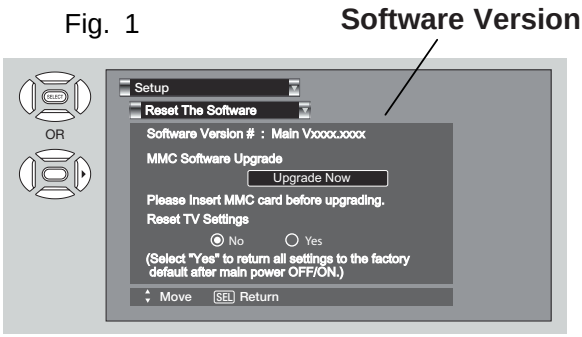
(1) Color temperature should be adjusted under the condition in which the screen is the brightest, thus the initial value for adjustment is set to its maximum.
(2) Adjustment is made by reducing brightness only. Reduce a bright color for adjustment.
(3) Video color temperature & Adjustment no. are the same, but addresses in the memory are different, thus there's no problem.

5. DIGITAL MAIN CHECK

5.1 SYSTEM SOFTWARE VERSION CHECK

(1) Press Menu button on the R/C or control panel.
(2) Enter the SETUP options, and then look for UPGRADES option.
(3) The Main software version will be display Vxxx.xxxx as shown on Fig. 1.
(4) If this version needs to be changed for a design improvement or failure, please select the Upgrade Now button after inserting. the MMC/SD card with the new software.

Fig. 1



(5) The upgrading process begin by filling a bar, when finish the message will say, "Upgrade complete …" when this appear unplug the TV from the AC line outlet to complete the process.
(6) Now plug again the TV and verify the new software version.
(7) The Main software version will display the latest version issued by Hitachi.

NOTE:

(1) Always check the service website for the latest software upgrade version. www.hitachiserviceusa.com.

(2) In case that the upgrade fails or when a CARD is inserted with new version and can't upgrade ; please perform the **FACTORY RESET** process to the TV, then try upgrading again.

BACK TO ADJUSTMENTS

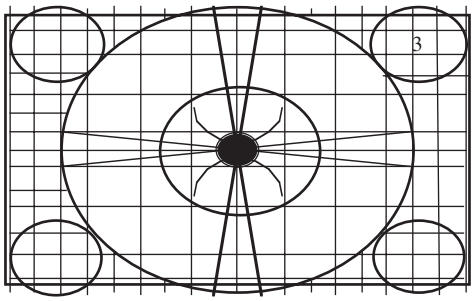
6. PICTURE CHECK

Preparation

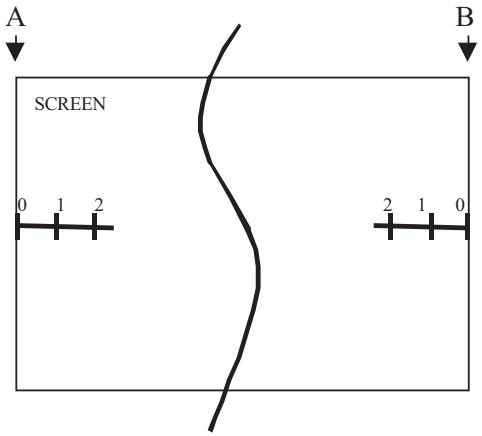
(1) Set AC120±1V.
(2) Turn on the power and leave it more than 5 min.
(3) Input 480p and 1080i circle pattern into Component video 3. (ASPECT 16:9 Standard)

Checking

(1) Receive 480p and 1080i signal, then check the following items 1~4:
   1. Check the symmetry of the pattern (right/left).
   2. Check the horizontal position and the balance (right/left).
   3. Check the symmetry of the pattern (top/bottom).
   4. Check the vertical position and the balance (top/bottom).



Remarks



SIGNAL	ASPECT	SPEC(A,B)
Hitachi circle pattern	16:9 Standard1	0 +/- 0.5

7. FACTORY RESET

After all of the adjustments of main chassis are finished, perform FACTORY RESET.

(1) Enter Adjustment Mode by the method described in sub-item 1-1 from page 32. ("Adjustment Procedure Start-up").
(2) From the first menu in Adjustment Mode, select FACT RESET adjustment code.
(3) Activate FACT RESET by pressing "Right" cursor key for more than 3 seconds.
(4) Other procedure to acces the FACTORY RESET is by sending the 92 hex code with a programable R/C.
(5) The procedure of the FACTORY RESET process is the following and the DATA table is shown next.

·Process of FACTORY RESET operation.

① The screen is colored **magenta** when FACTORY RESET start.
② The screen is colored **green** when FACTORY RESET finish normally.
③ The screen is colored **RED** when FACTORY RESET finish abnormally.

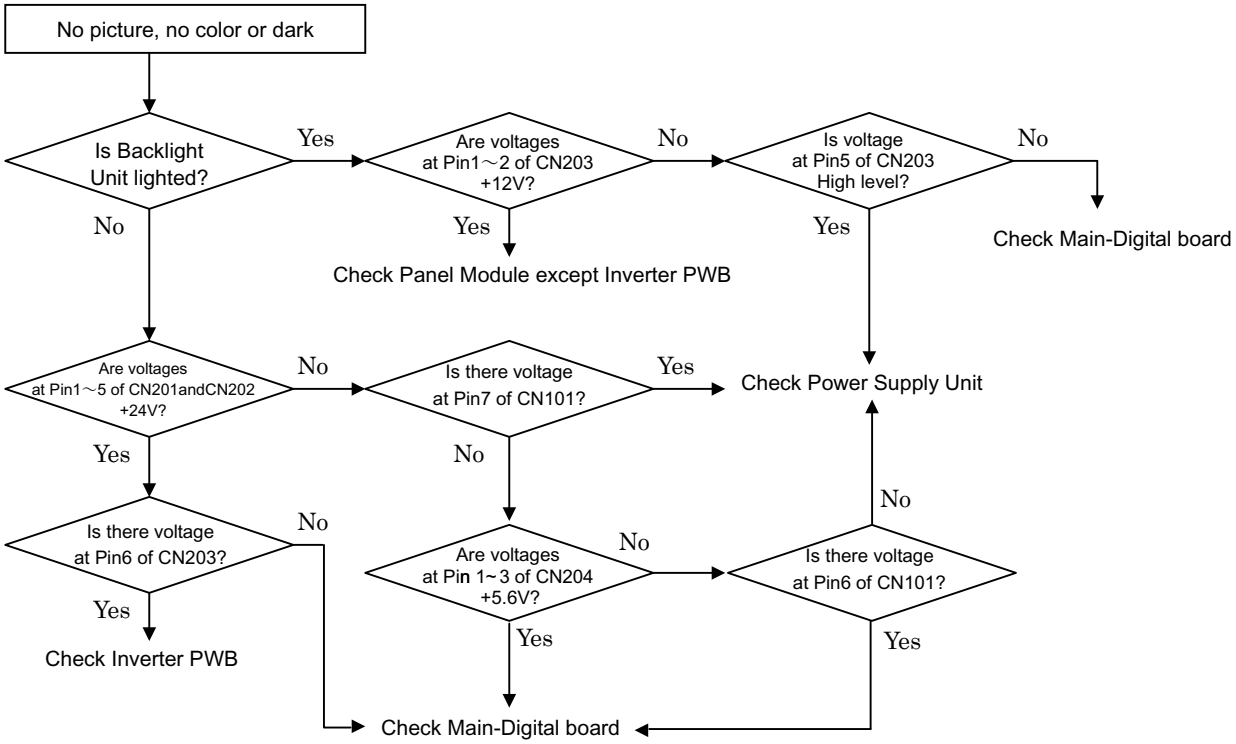
(6) After FACTORY RESET, the AC cord should be unplugged. Unplug and plug AC cord and then all settings and data will be updated.

(7) When the LCD turns ON, it will tune CH03 this is the complete operation of FACTORY RESET process.

BACK TO ADJUSTMENTS

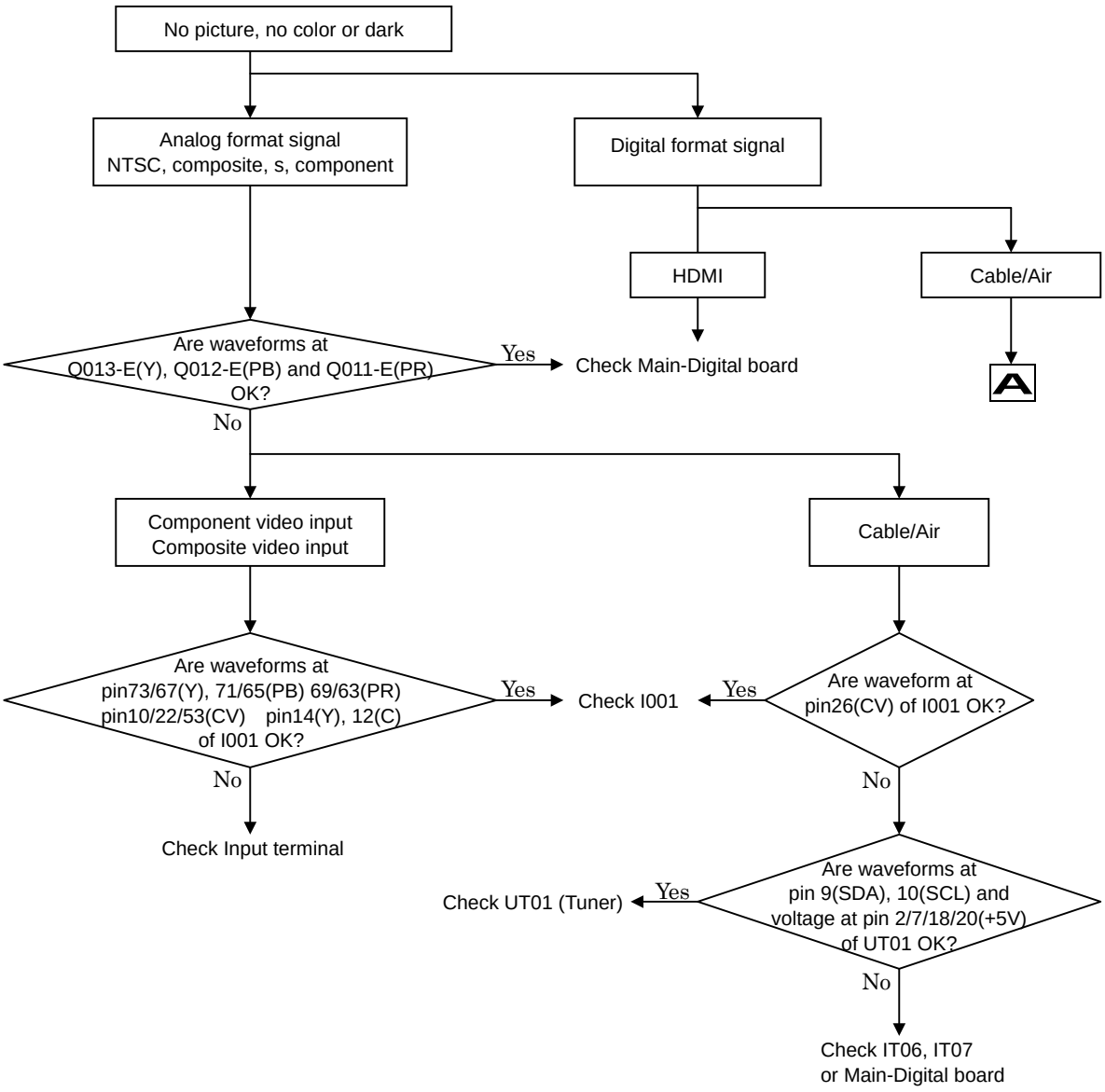
TROUBLE-SHOOTING FLOW CHARTS

LCD Panel Module troubleshooting.



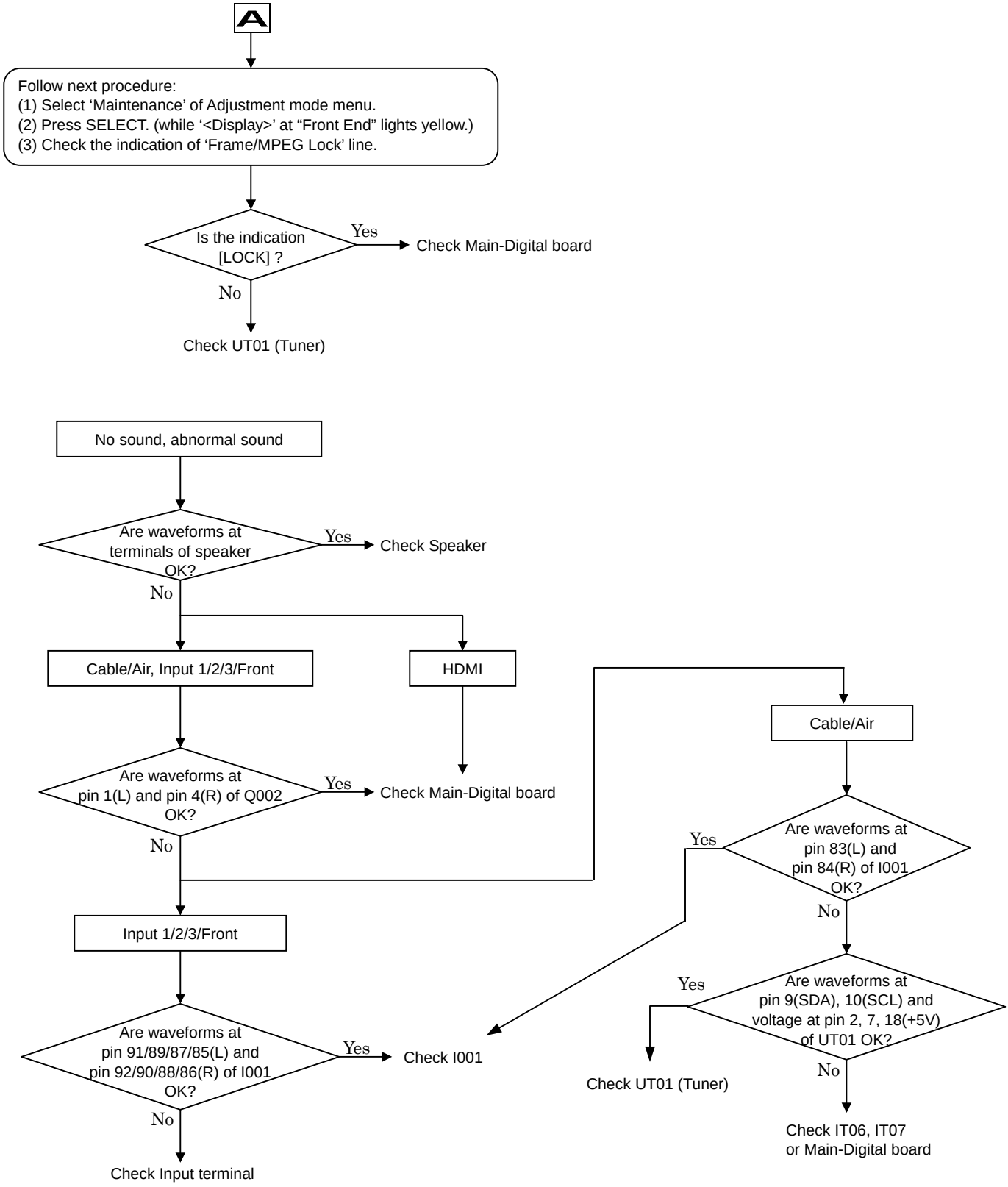
TROUBLE-SHOOTING FLOW CHARTS

Terminal PWB circuit troubleshooting



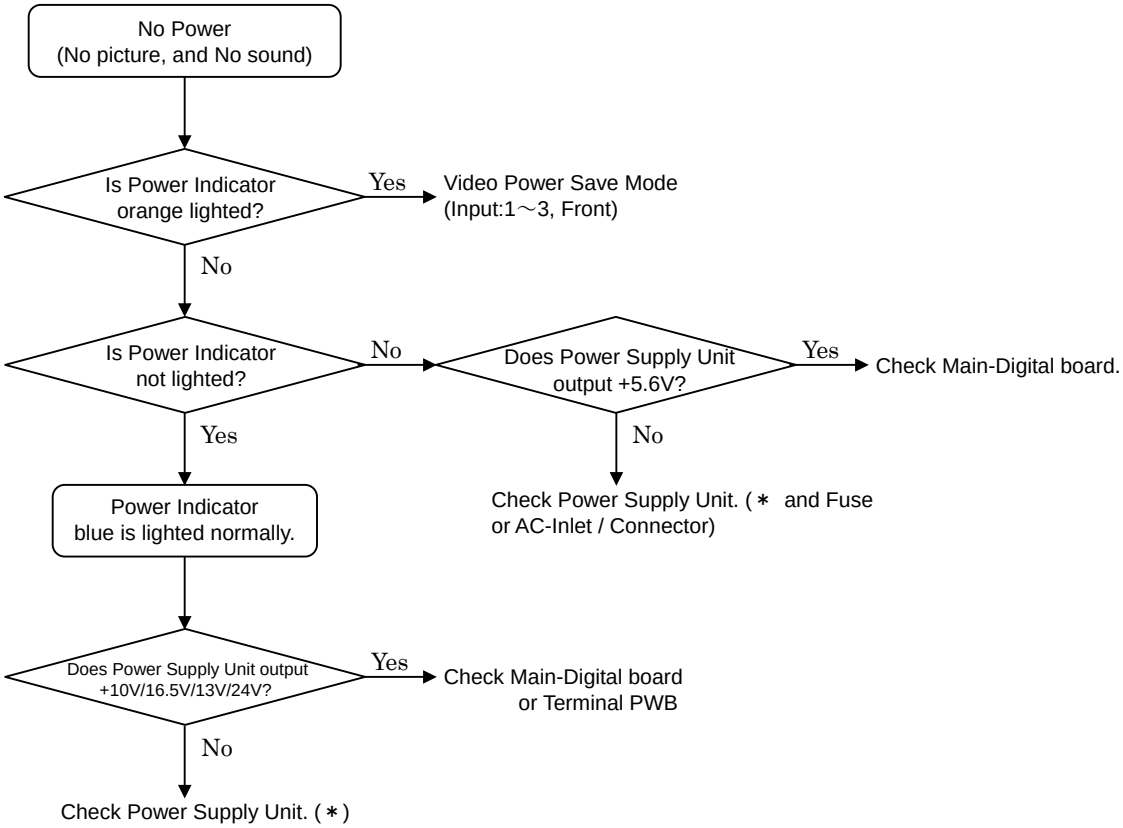
TROUBLE-SHOOTING FLOW CHARTS

…Terminal circuit Troubleshooting diagram continued.



TROUBLESHOOTING FLOW CHARTS

Power Supply troubleshooting



(＊) Power-On control signal for Power Supply Unit

(1) Power connected : ON → PSU outputs STBY+5V.

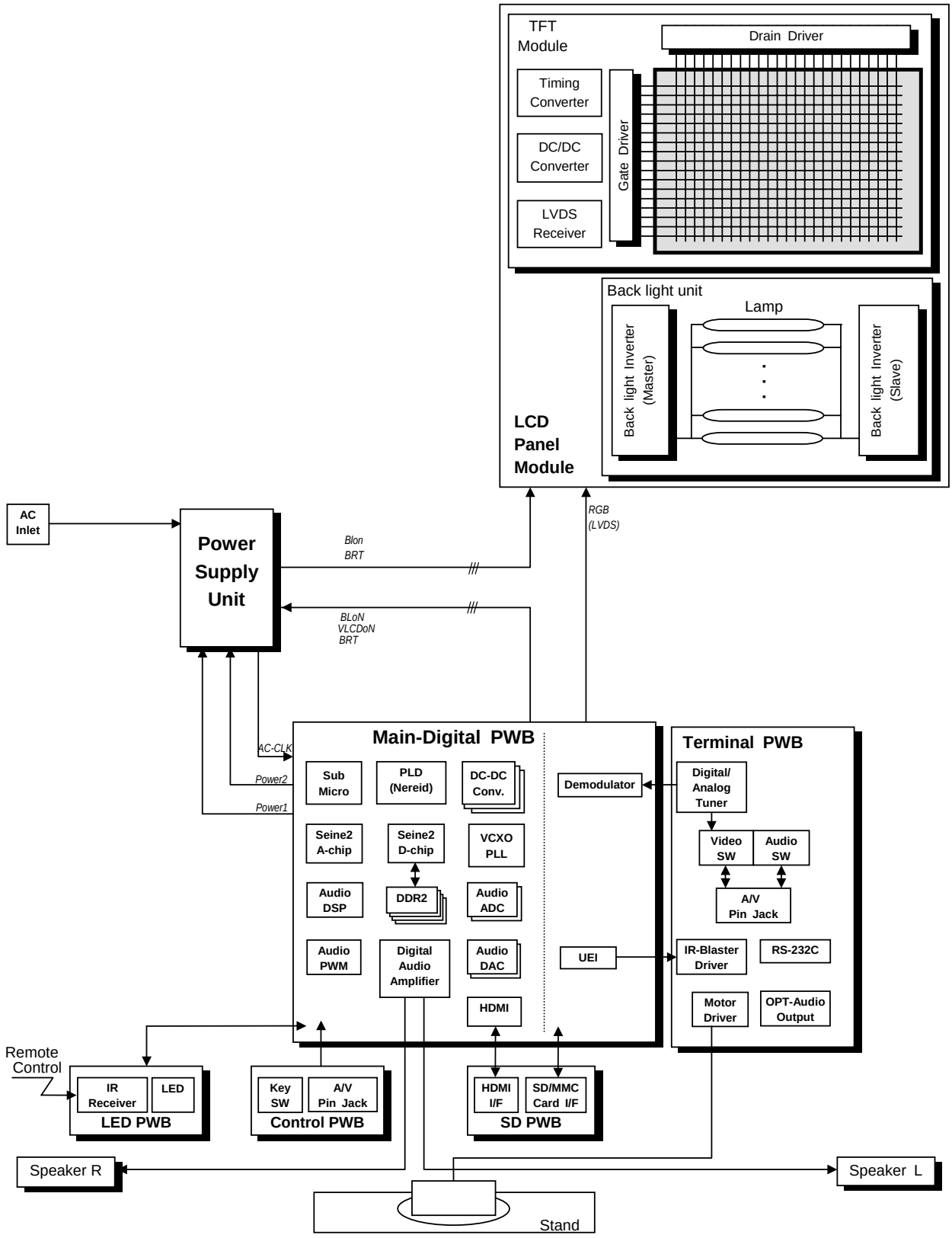
(2) PoWER_1 (CN101 [6]) : High → PSU outputs +5.6V.

(3) PoWER_2 (CN101 [7]) : High → PSU output +10V,16.5V, audio 13V and 24V.

If any control signal does not rise, PSU cannot output the voltage.
・PoWER_1/2 : not rise ----- Main-Digital PWB trouble

BLOCK DIAGRAM

For L47V651 and L47S601



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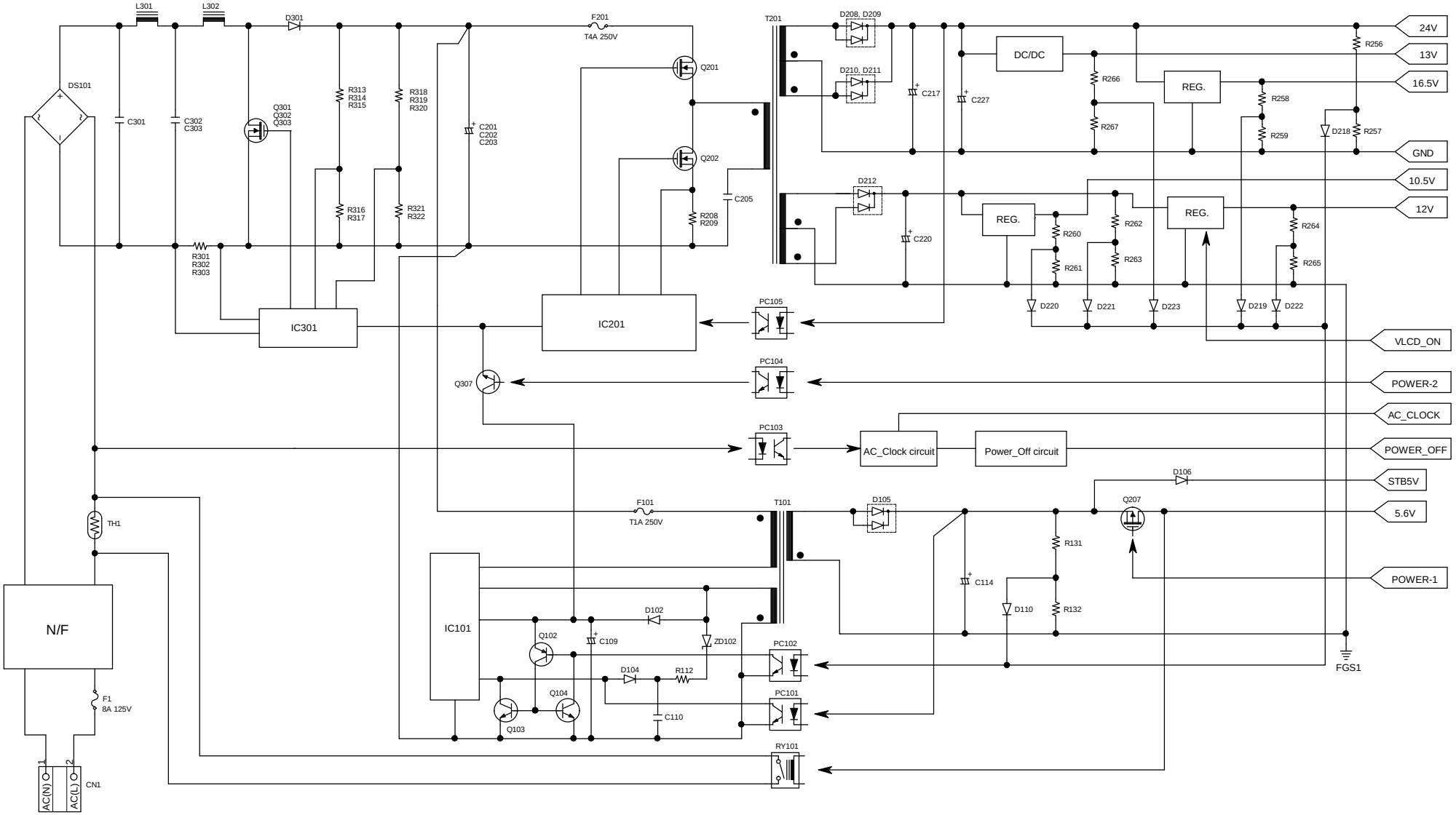
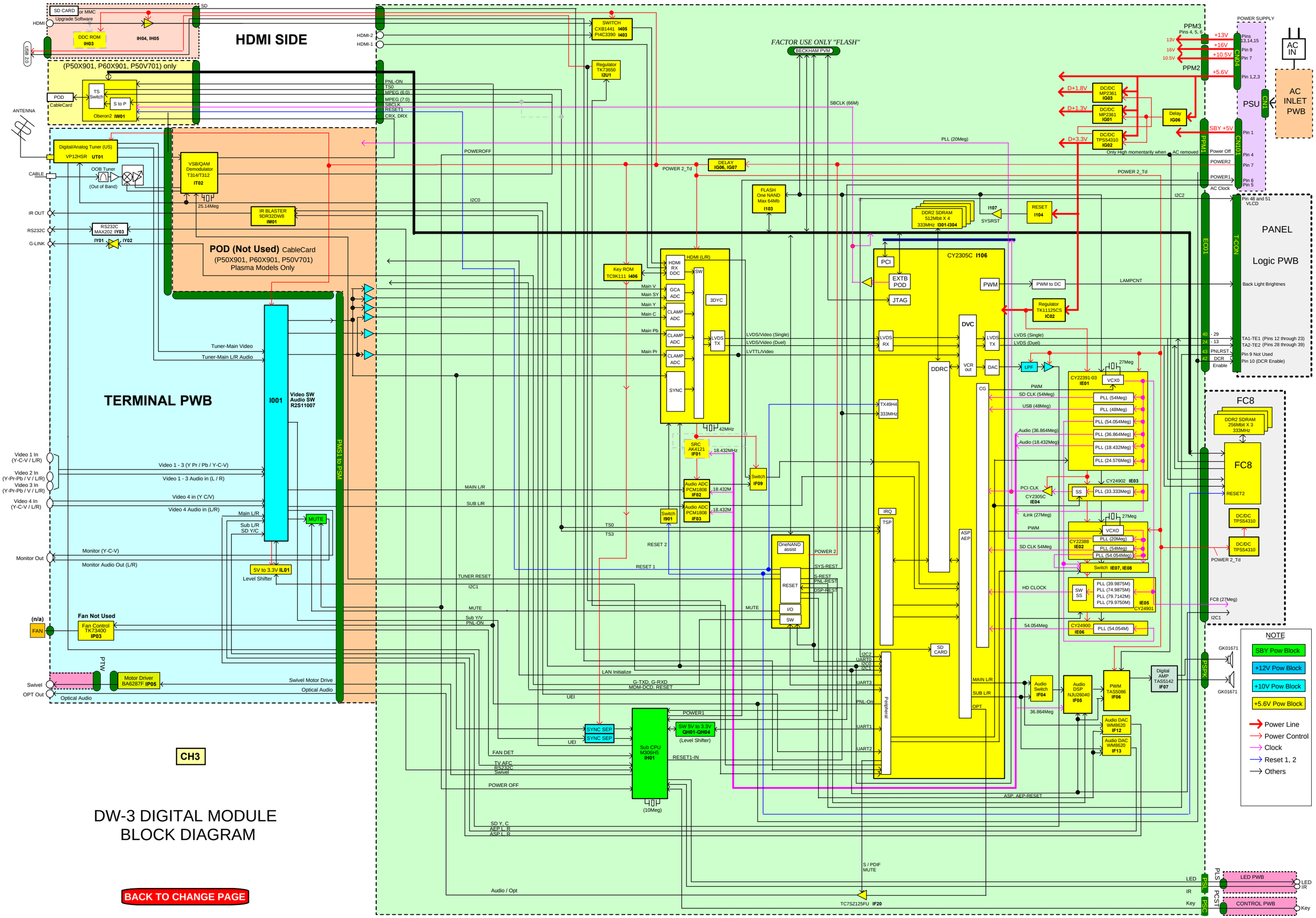
BLOCK DIAGRAM

POWER SUPPLY BOARD

L47S601 and L47V651

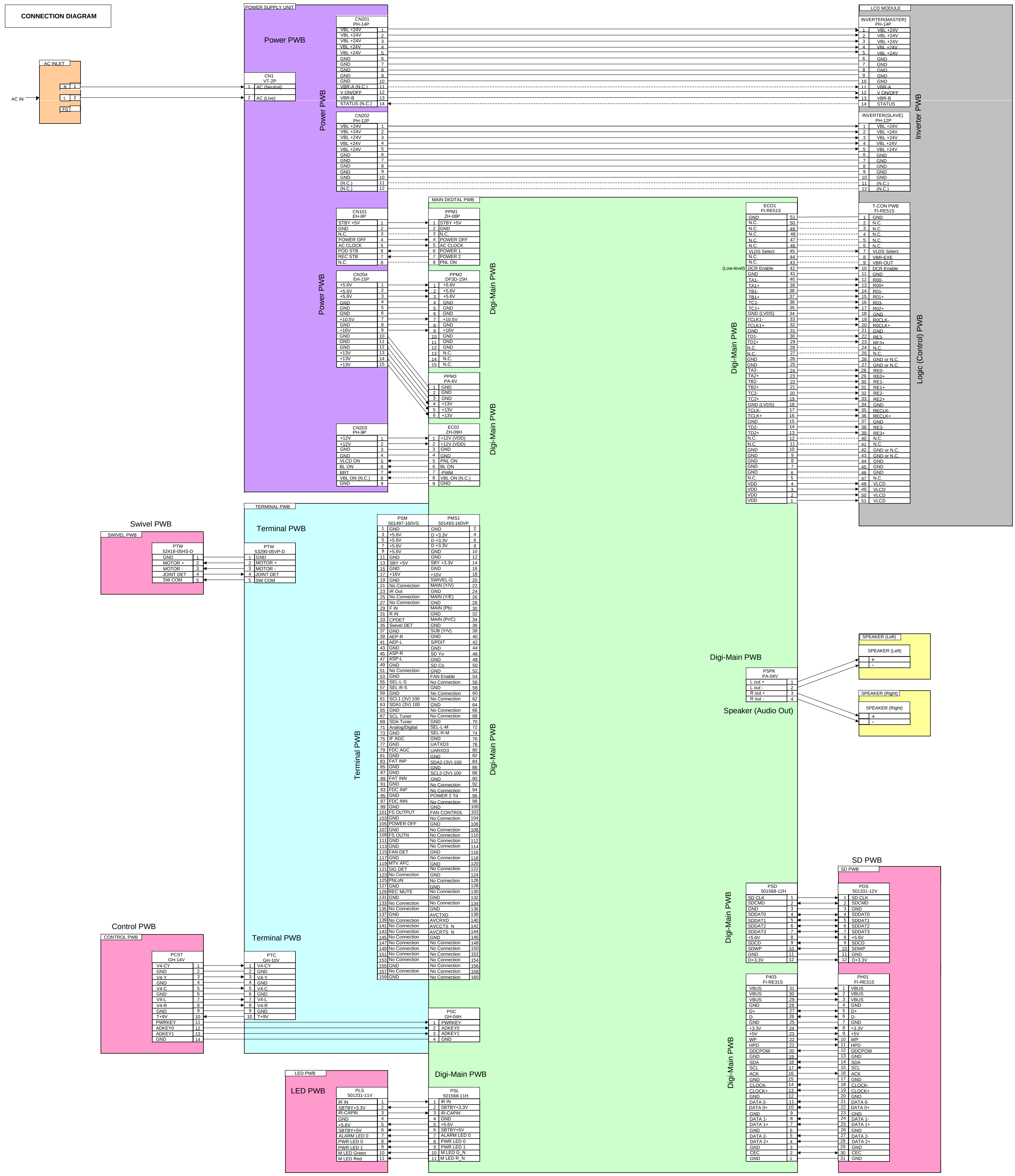
DW3G




HDMI SIDE
SD CARD or MMC Upgrade Software
DDC ROM IH03
IH04, IH05
HDMI
SD
HDMI-2
HDMI-1
USB 2.0
(P50X901, P60X901, P50V701) only
POD CableCard
TS Switch
S to P
Oberon2 IW01
ANTENNA
PNL-ON
TS0
MPEG (6:0)
MPEG (7:0)
SBCLK
RESET1
CRX, DRX
SWITCH CXB1441 I405 PI4C3390 I403
Regulator TK73650 I2U1
FACTOR USE ONLY "FLASH"
BECKHAM PVM
SBCLK (66M)
PLL (20Meg)
POWEROFF
POWER 2_Td
DELAY IG06, IG07
I2C0
FLASH One NAND Max 64Mb I103
DDR2 SDRAM 512Mbit X 4 333MHz I301-I304
I107 SYSRST
RESET I104
Digital/Analog Tuner (US) VP12HSR UT01
OOB Tuner (Out of Band)
CABLE
VSB/QAM Demodulator T314/T312 IT02
40P 25.14Meg
IR BLASTER 9DR32DWB IM01
IR OUT
RS232C MAX202 IY03
IY01 IY02
G-LINK
POD (Not Used) CableCard
(P50X901, P60X901, P50V701)
Plasma Models Only
TERMINAL PWB
Tuner-Main Video
Tuner-Main L/R Audio
I001 Video SW Audio SW R2S11007
PMS1 to PSM
Video 1 In (Y-C-V / L/R)
Video 2 In (Y-Pr-Pb / V / L/R)
Video 3 In (Y-Pr-Pb / V / L/R)
Video 4 In (Y-C-V / L/R)
Video 1 - 3 (Y Pr / Pb / Y-C-V)
Video 1 - 3 Audio in (L / R)
Video 4 in (Y C/V)
Video 4 Audio in (L/R)
Main L/R
Sub L/R SD Y/C
MUTE
Monitor Out
Monitor (Y-C-V)
Monitor Audio Out (L/R)
5V to 3.3V IL01 Level Shifter
(n/a)
Fan Not Used
FAN
Fan Control TK73400 IP03
PTW
Swivel
OPT Out
Motor Driver BA6287F IP05
Swivel Motor Drive
Optical Audio
Optical Audio
CH3
DW-3 DIGITAL MODULE BLOCK DIAGRAM
BACK TO CHANGE PAGE
Key ROM TC9K111 I406
HDMI (L/R)
HDMI RX DDC
SW
3DYC
GCA ADC
CLAMP ADC
SYNC
Main V
Main SY
Main Y
Main C
Main Pb
Main Pr
LVDS TX
LVDS/Video (Single)
LVDS/Video (Duel)
LVTTL/Video
42MHz
SRC AK4121 IF01
18.432MHz
Audio ADC PCM1808 IF02
Audio ADC PCM1808 IF03
Switch IF09
Switch I901
MAIN L/R
SUB L/R
TS0
TS3
RESET 2
RESET 1
TUNER RESET
I2C1
MUTE
Sub Y/V
PNL-ON
OneNAND assist
RESET
I/O
SW
POWER 2
SYS-REST
S-REST
PNL-REST
DSP-REST
SYNC SEP
SYNC SEP
UEI
Sub CPU M306H5 IH01
(10Meg)
SW 5V to 3.3V QH01-QH04
(Level Shifter)
POWER1
FAN DET
TV AFC
RS232C
Swivel
POWER OFF
RESET1-IN
SD Y, C
AEP L, R
ASP L, R
LAN Initialize
G-TXD, G-RXD
MDM-DCD, RESET
UEI
PCI
EXTB POD
JTAG
CY2305C I106
PWM
PWM to DC
LAMPCNT
Regulator TK11125CS IC02
LVDS RX
DVC
LVDS TX
LVDS (Single)
LVDS (Duel)
DDRC
VCR out
DAC
LPF
27Meg
CG
TX49H4 333MHz
CY22391-03 IE01
VCX0
PLL (54Meg)
PLL (48Meg)
PLL (54.054Meg)
PLL (36.864Meg)
PLL (18.432Meg)
PLL (24.576Meg)
PWM
SD CLK (54Meg)
USB (48Meg)
Audio (36.864Meg)
Audio (18.432Meg)
CY24902 IE03
SS
PLL (33.333Meg)
PCI CLK
CY2305C IE04
iLink (27Meg)
CY22388 IE02
VCXO
PLL (20Meg)
PLL (54Meg)
PLL (54.054Meg)
Switch IE07, IE08
HD CLOCK
SW SS
PLL (39.9875M)
PLL (74.9875M)
PLL (79.7142M)
PLL (79.9750M)
IE05 CY24901
CY24900 IE06
PLL (54.054M)
54.054Meg
IRQ
TSP
ASP AEP
SD CARD
I2C2
UART0
I2C0
I2C1
UART3
PNL-On
Peripheral
UART1
UART2
MAIN L/R
SUB L/R
OPT
ASP_AEP-RESET
Audio Switch IF04
36.864Meg
Audio DSP NJU26040 IF05
PWM TAS5086 IF06
Digital AMP TAS5142 IF07
Audio DAC WM8620 IF12
Audio DAC WM8620 IF13
S / PDIF
MUTE
TC7SZ125FU IF20
LED
IR
Key
PLS
PCST
LED PWB
CONTROL PWB
POWER SUPPLY
PPM3 Pins 4, 5, 6
PPM2
13V
16V
10.5V
+13V
+16V
+10.5V
+5.6V
CN104
Pins 13,14,15
Pin 9
Pin 7
Pin 1,2,3
PSU
CN1
AC IN
AC INLET PWB
D+1.8V
D+1.3V
D+3.3V
DC/DC MP2361 IG03
DC/DC MP2361 IG01
DC/DC TPS54310 IG02
Delay IG06
SBY +5V
CN101
Pin 1
Pin 4
Pin 7
Pin 6
Pin 5
Power Off
POWER2
POWER1
AC Clock
Only High momentarily when AC removed
I2C2
EC01
T-CON
Pin 48 and 51 VLCD
PANEL
Logic PWB
Back Light Brightnes
TA1-TE1 (Pins 12 through 23)
TA2-TE2 (Pins 28 through 39)
Pin 9 Not Used
Pin 10 (DCR Enable)
PNLRST
DCR
Enable
FC8
DDR2 SDRAM 256Mbit X 3 333MHz
RESET2
DC/DC TPS54310
DC/DC TPS54310
POWER 2_Td
FC8 (27Meg)
I2C1
PSPK
GK01671
GK01671
NOTE
SBY Pow Block
+12V Pow Block
+10V Pow Block
+5.6V Pow Block
Power Line
Power Control
Clock
Reset 1, 2
Others

CONNECTIONS DIAGRAM
L47S601 and L47V651

CH3



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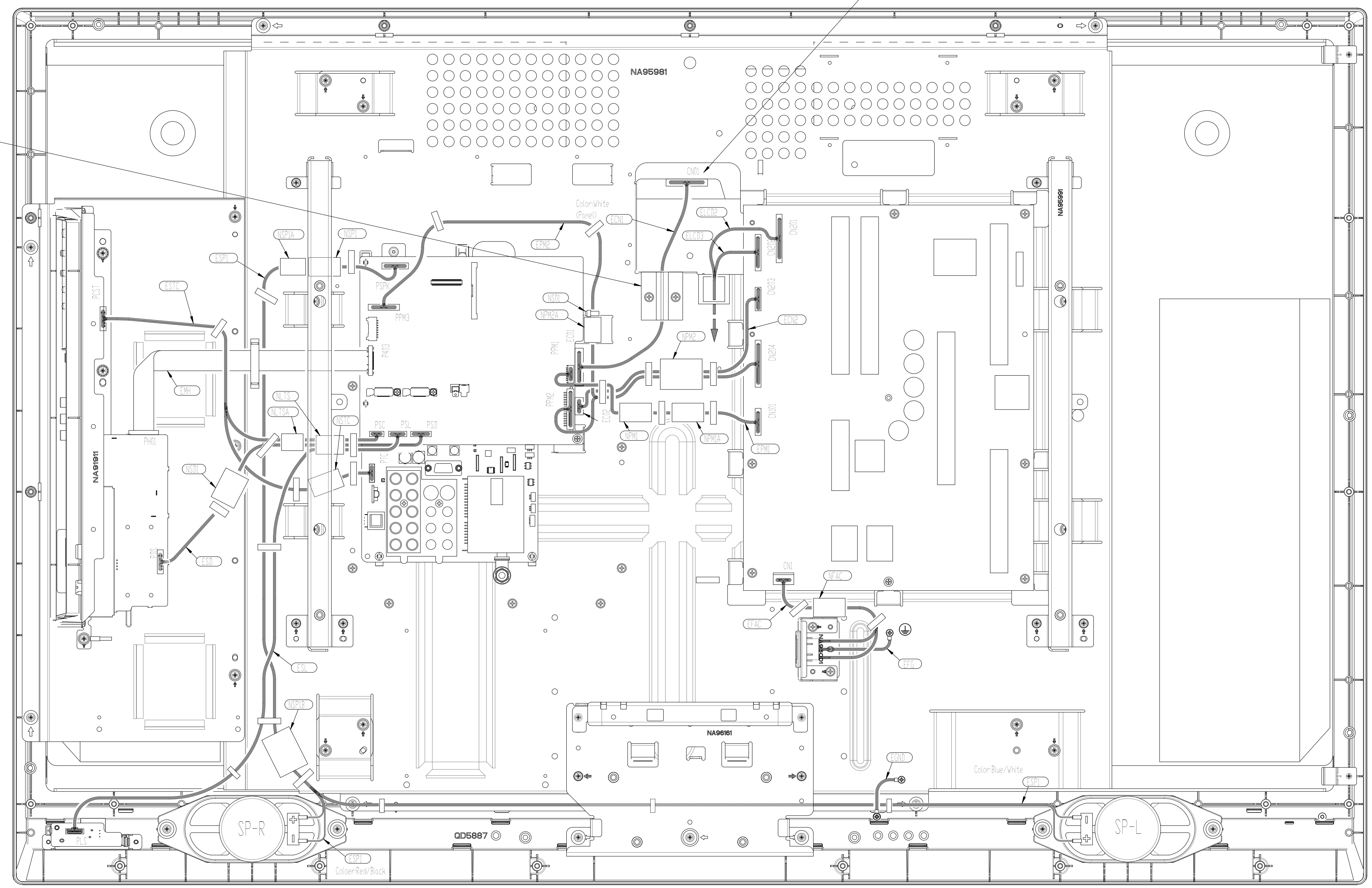
DW3 L47S601/V651 WIRING DIAGRAM

Table of used cable connectors.

Connector	Plug Pin 1		Plug Pin 2	
Name	Board or Location	Name	Board or Location	Name
ESTC	CONTROL	PCST	TERMINAL	PTC
			MAIN DIGITAL	PSC
ESL	MAIN DIGITAL	PSL	LED	PLS
ESD	MAIN DIGITAL	PSD	SD/HDMI	PDS
ESP1	MAIN DIGITAL	PSPK	SP-L/R	SP-L
				SP-R
EPM1	POWER	CN101	MAIN DIGITAL	PPM1
EPM2	POWER	CN204	MAIN DIGITAL	PPM2
				PPM3
ECN1	MAIN DIGITAL	EC01	PANEL LOGIC	CN1
ECN2	MAIN DIGITAL	EC02	POWER	CN203
EFAC	POWER	CN1	AC INLET	-
EFG	PANEL BASS	GND		
EGND	FRONT SP METAL	-	PANEL BASE	-
EMH	MAIN DIGITAL	P403	SD/HDMH	PH01
ELCD2	POWER(BACK LIGHT)	CN201	PANEL INVERTER(MASTER)	
ELCD3	POWER(BACK LIGHT)	CN202	PANEL INVERTER(SLAVE)	

NOTICE

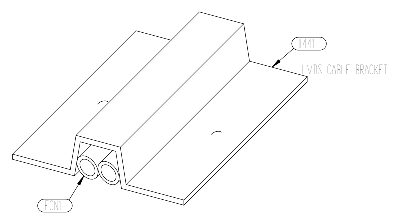
Insert the white tape marking side in CN01 (Panel).



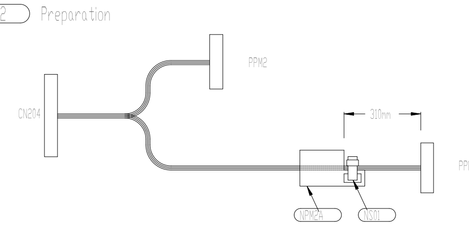
NOTICE

Pay Attention

Pass the ECN1 cable through the hollow of the cable bracket.



EPM2 Preparation



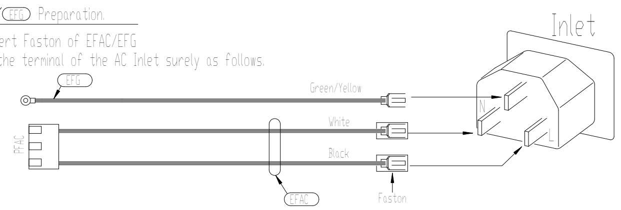
Specification

1. This drawing shows the wiring diagram for 47"LCD models.
   The connection and wire styling are in the figure.
2. This drawing shows the rear view of the TV set.
3. Lock lead holders surely.

PS Process

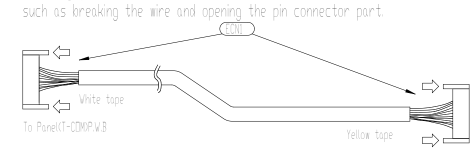
EFAC / EFG Preparation.

Insert Faston of EFAC/EFG
in the terminal of the AC Inlet surely as follows.



CAUTION (Connector)

Do not grip the wire in the direction of the arrow to avoid defects.
such as breaking the wire and opening the pin connector part.



"ECN1 (LVDS)" has a fragile connector housing.
Be careful not to break it during the connecting operation.
During the connecting operation, push carefully both sides of the housing latch terminal
to the insert direction in order to avoid breaking it.

Push straightforward in the
direction where the
arrow points

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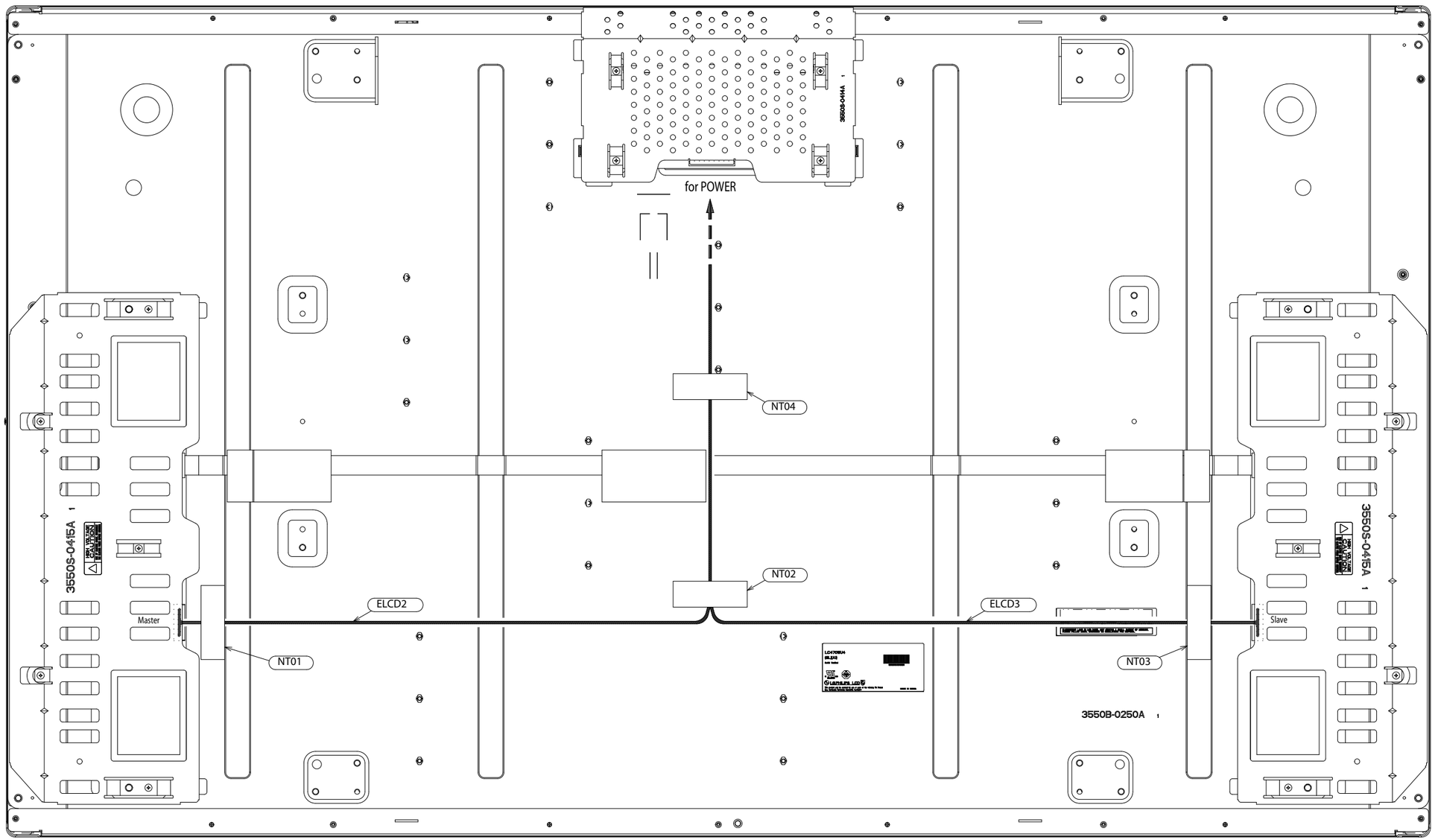
DW3 L47S601/V651 WIRING DIAGRAM

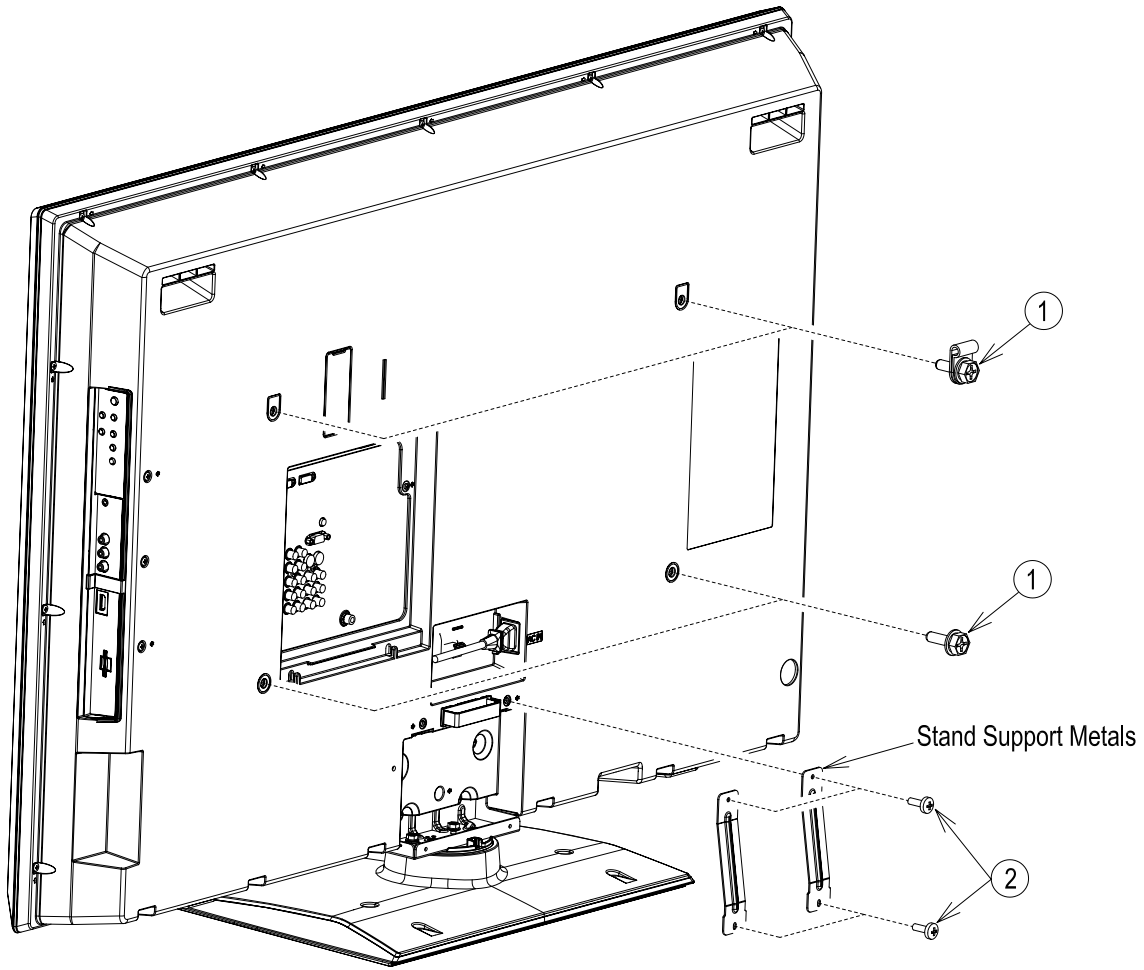


NT01~04 : NITTO TAPE NO. 5
W20 (P#9449545)
L = 60mm

BACK COVER 1

① Remove Screw M3M 6*18 P#MJ03693(4 Pcs.)
M6 Cable Clamp(2 Pcs.)

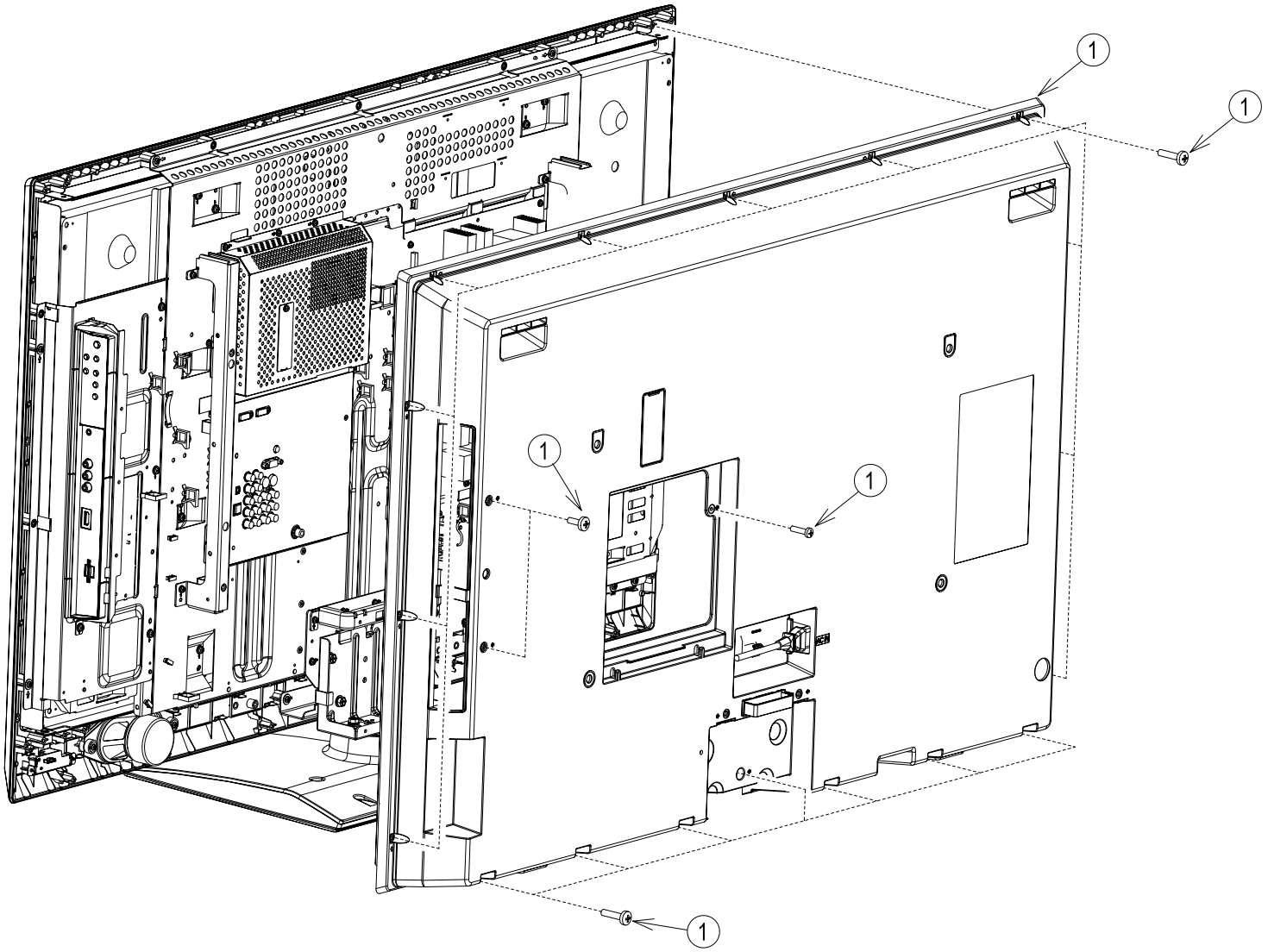
② Remove Screw M3D 4*10 P#MJ03727(4 Pcs.)
Stand Support Metals



BACK COVER 2

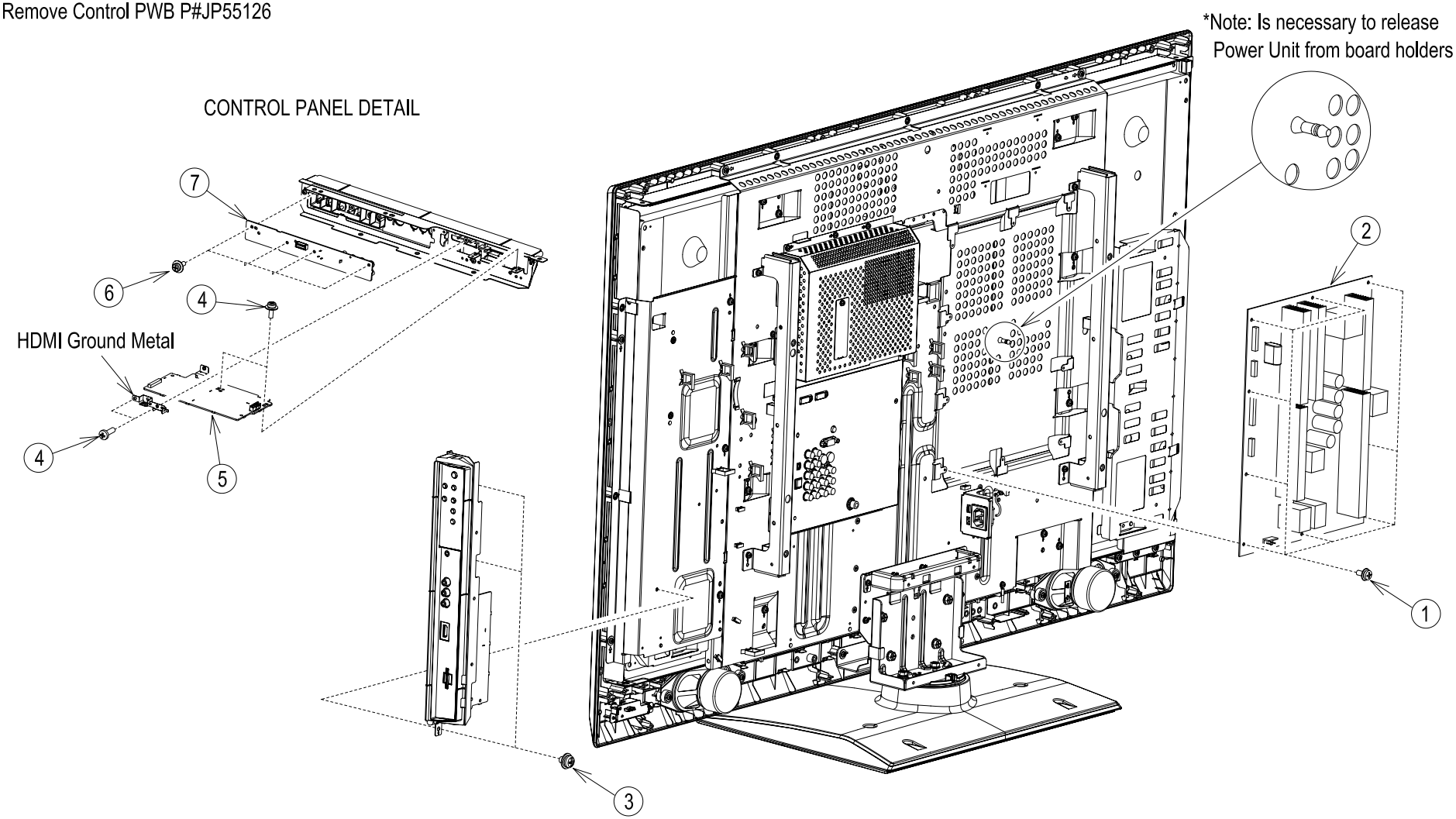
① Remove Screw T2D 4*16 P#MJ03568(16 Pcs.)
Screw M3D 4*10 P#MJ03727(3 Pcs.)
Screw M3D 3*10 P#MJ03649

② Remove Back Cover P#QD58881



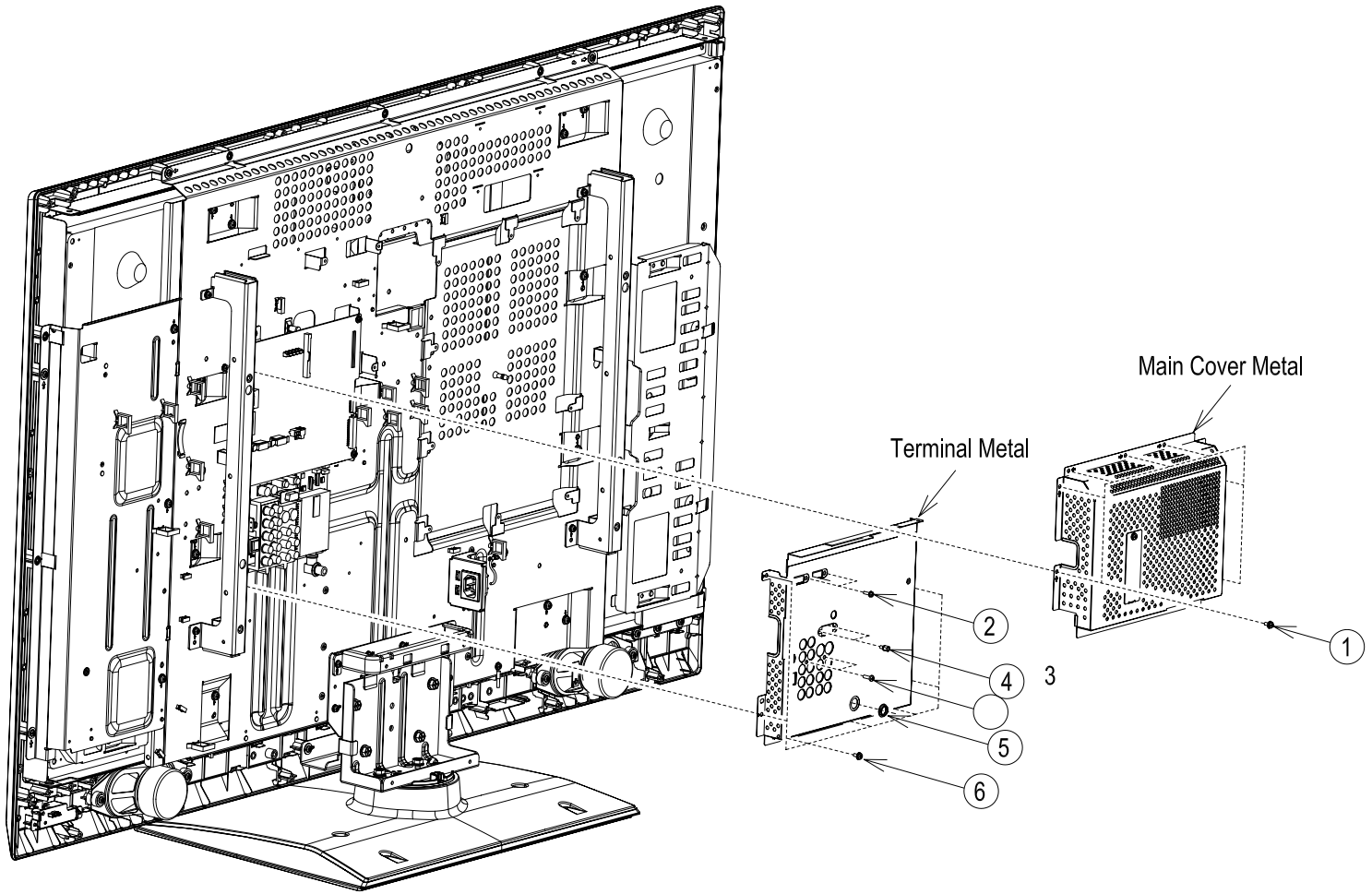
POWER UNIT, CONTROL PANEL ASS'Y

① Remove Screw M3D 3*8 P#MJ03646(7 Pcs.)
Screw M3E 3*8 P#MJ03467(2 Pcs.)
② Remove Power unit P#HA02471
③ Remove Screw M3M 4*6 P#MJ04049(3 Pcs.)
Control Panel Ass'y
④ Remove Screw T2B 3*10 P#MJ03733
Screw M3E 3*8 P#MJ03467(3 Pcs.)
⑤ Remove SD PWB P#JP55126
⑥ Remove Screw T2B 3*10 P#MJ3733(2 Pcs.)
Screw M3E 3*8 P#MJ03467(2 Pcs.)
⑦ Remove Control PWB P#JP55126



TERMINAL PWB, MAIN PWB 1

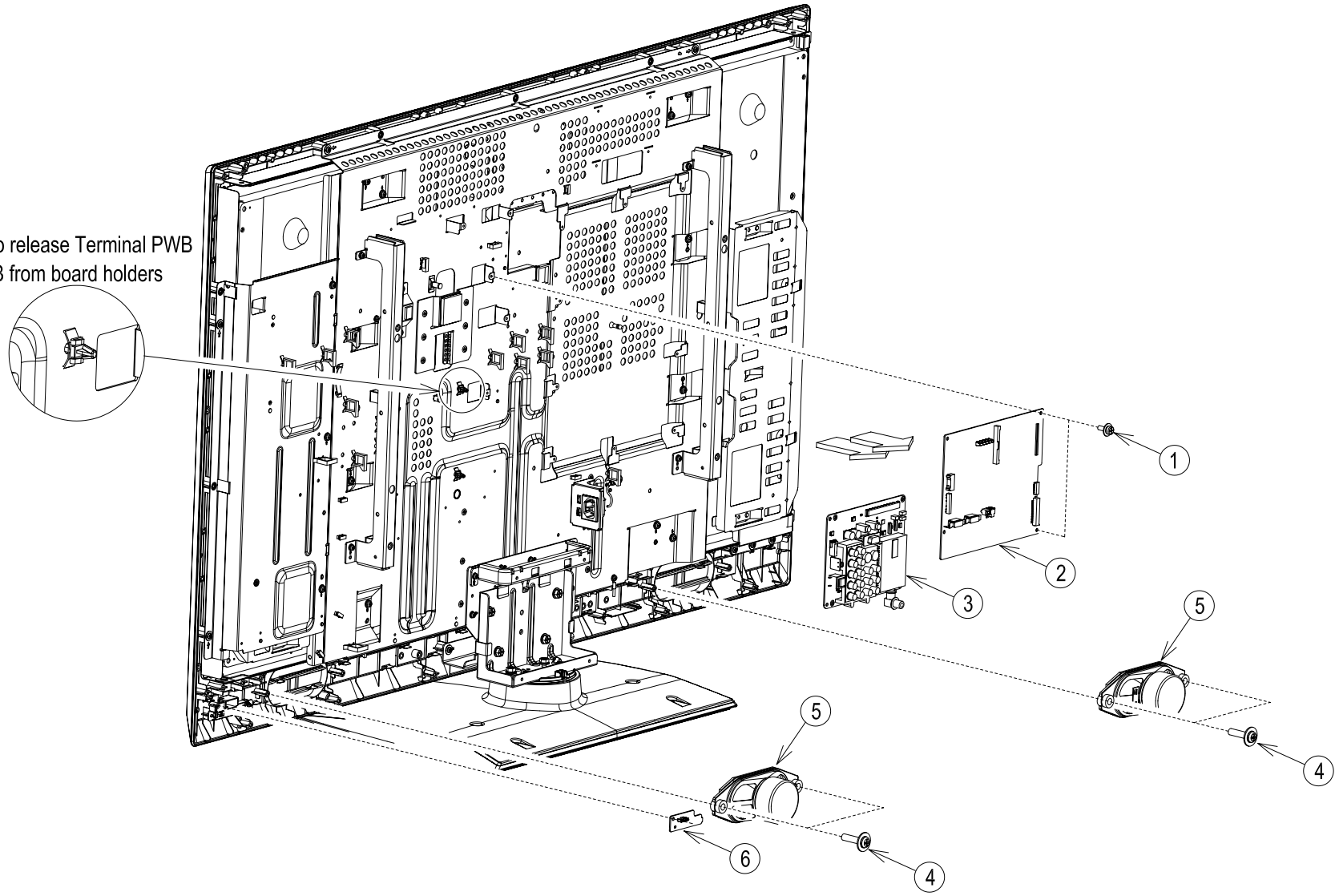
① Remove Screw M3E 3*8 P#MJ03467(7 Pcs.)
Main Shield Metal
② Remove Screw M3M 3*6 P#MJ03594(2 Pcs.)
③ Remove Screw T2B 3*10 P#MJ03733(2 Pcs.)
④ Remove D-Sub Screw P#MJ03351(2 Pcs.)
⑤ Remove Tuner Nut P#MK01431/Washer P#MK01511
⑥ Remove Screw M3E 3*8 P#MJ3467(7 Pcs.)



TERMINAL PWB, MAIN PWB 2, Speakers

① Remove Screw M3E 3*8 P#MJ03467(2 Pcs.)
② Remove Main PWB P#JP55157
③ Remove Terminal PWB P#JP55126
④ Remove Screw T2B4*16 P#MJ04013(4 Pcs.)
⑤ Remove Speakers P#GK01671(2 Pcs.)
⑥ Remove LED PWB P#JP55126

*Note: Is necessary to release Terminal PWB and Main PWB from board holders

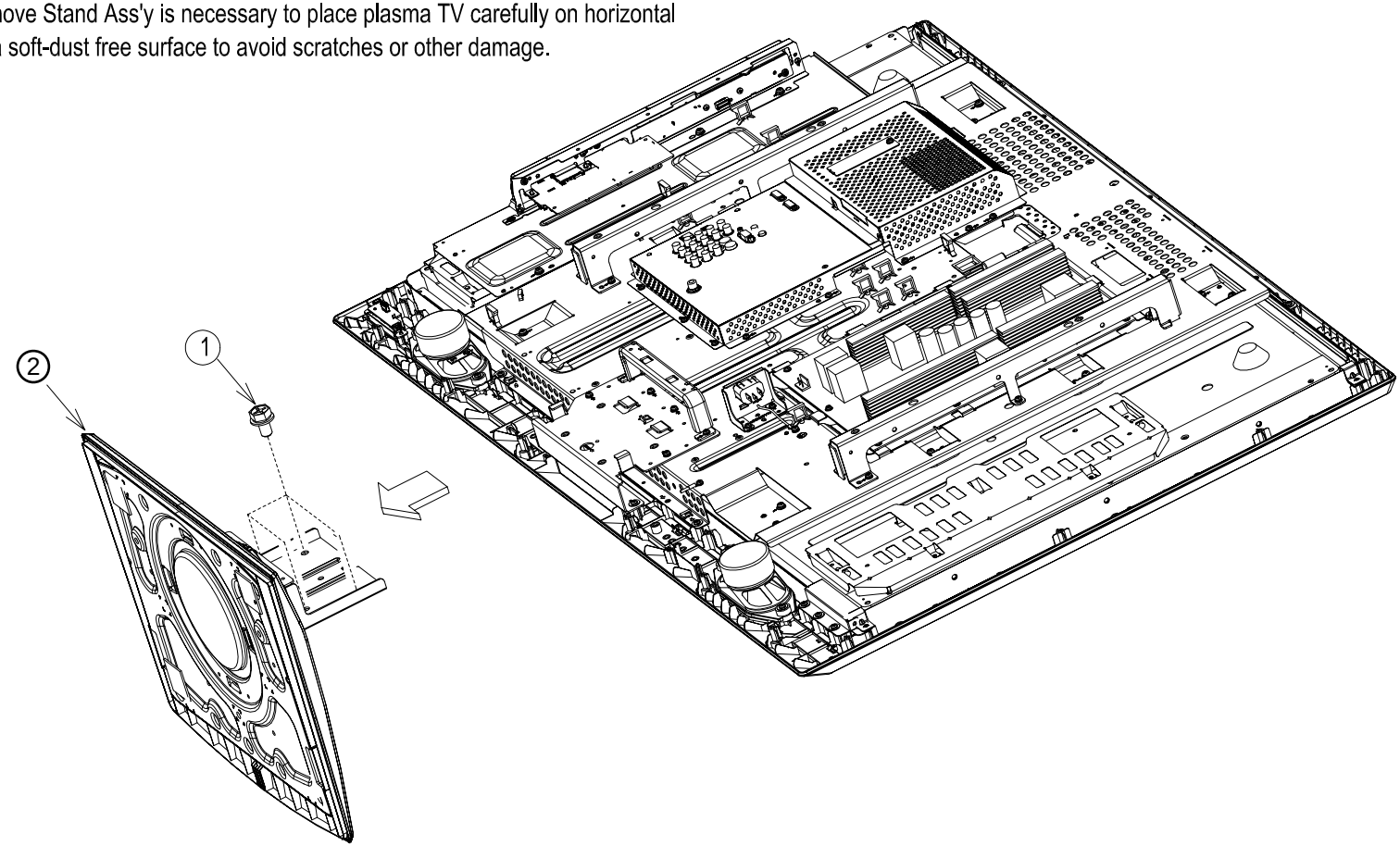


FRAME REMOVAL Step 1

① Remove Screw M3M 6*18 P#MJ03693(4 Pcs.)

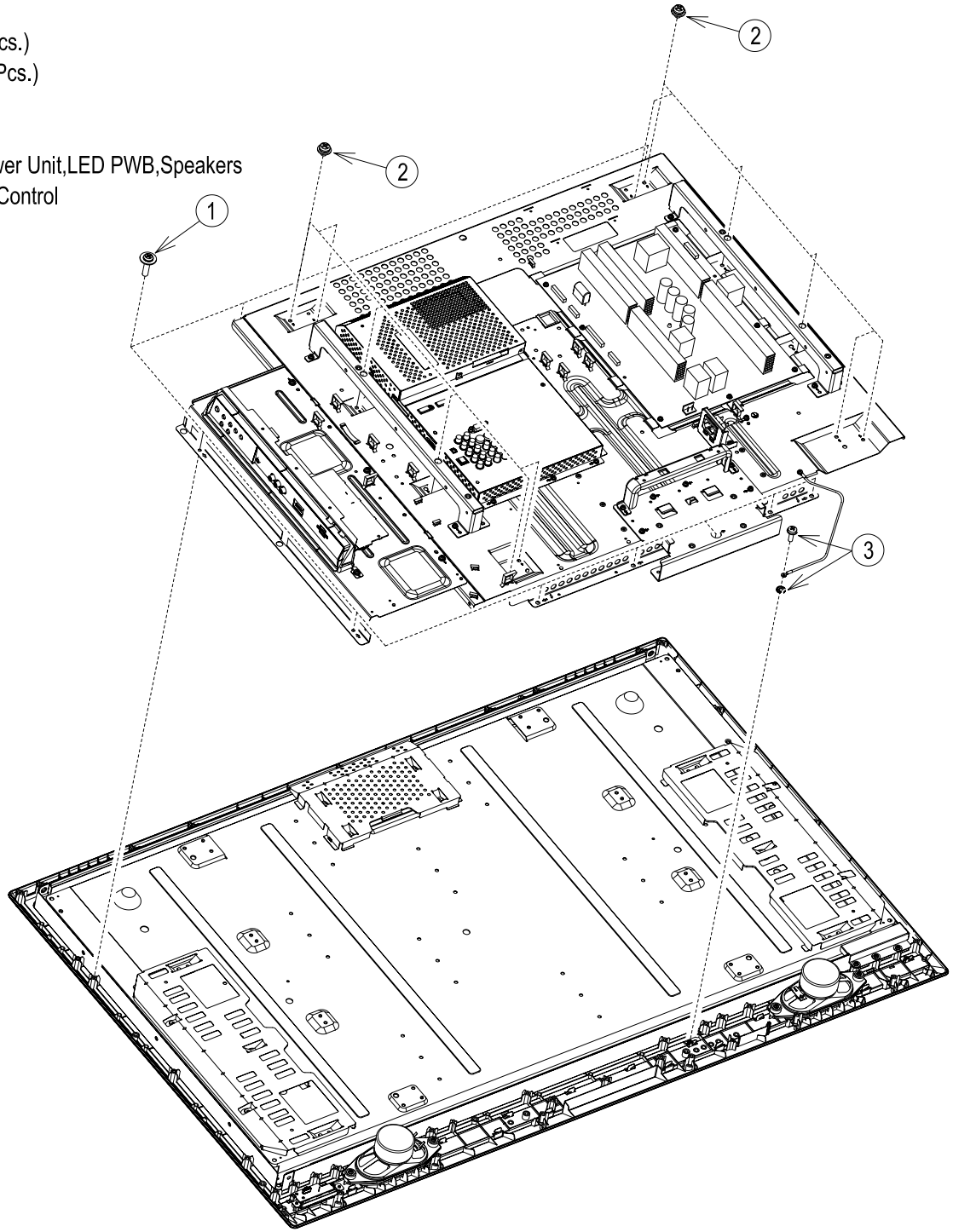
② Stand Base QJ04573

*Note1: In order to remove Stand Ass'y is necessary to place plasma TV carefully on horizontal position over a soft-dust free surface to avoid scratches or other damage.



FRAME REMOVAL Step 2

① Remove Screw T2B 4*16 P#MJ04013(8 Pcs.)
② Remove Screw M3M 4*6 P#MJ04049(12 Pcs.)
③ Remove Screw T2B 3*10 P#MJ03733
Washer P#MK01501
Connectors from LCD Panel,Power Unit,LED PWB,Speakers
Base Metal/Chassis/Power Unit/Control



FRAME REMOVAL Step 3

① Remove Screw T2B 4*16 P#MJ04013(4 Pcs.)

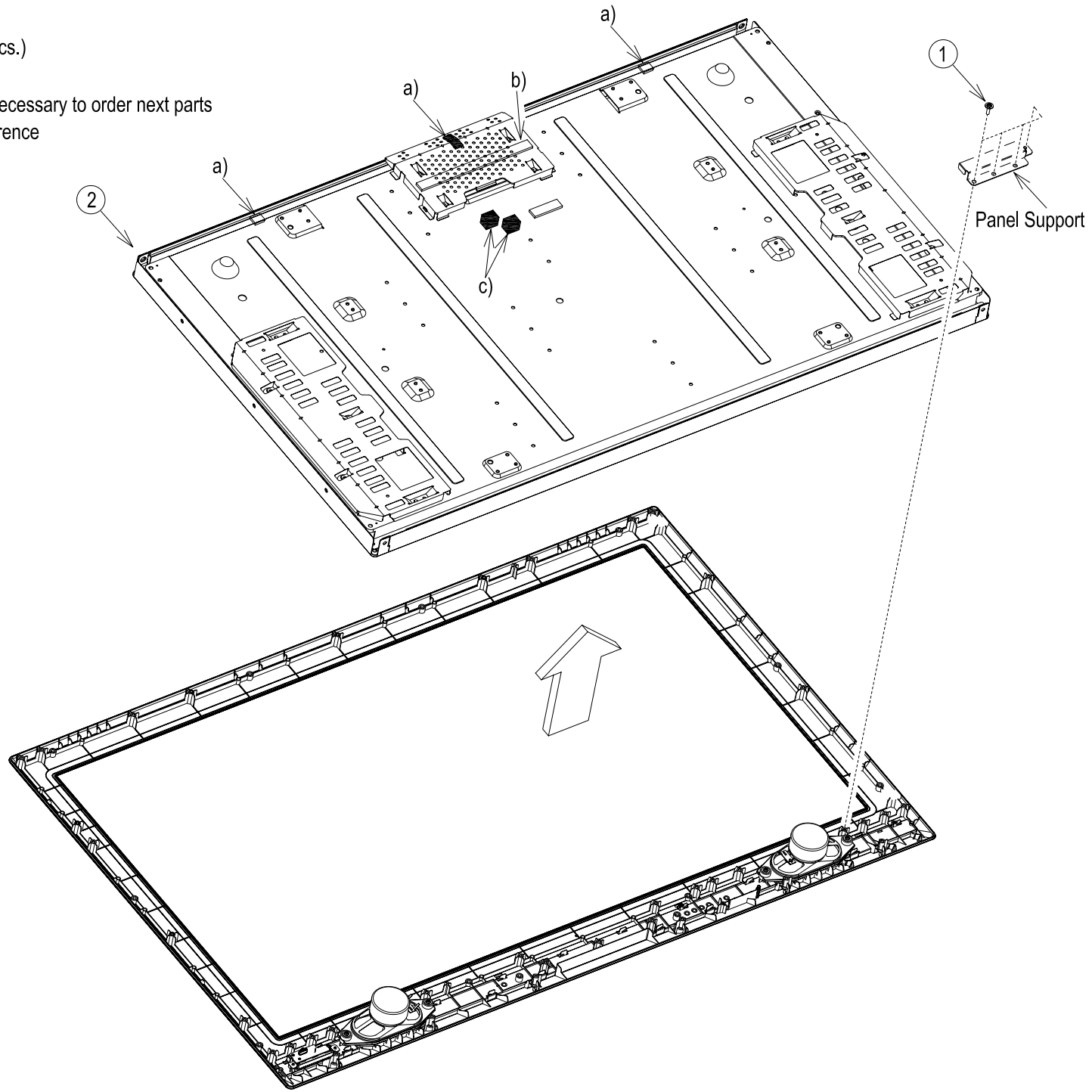
② Remove LCD Panel P#DD02491K

*Note: In case of Panel Replacement also is necessary to order next parts
Use defective frame for assemble reference

a) Gasket 20-5-50 P#MF02501(3 Pcs.)

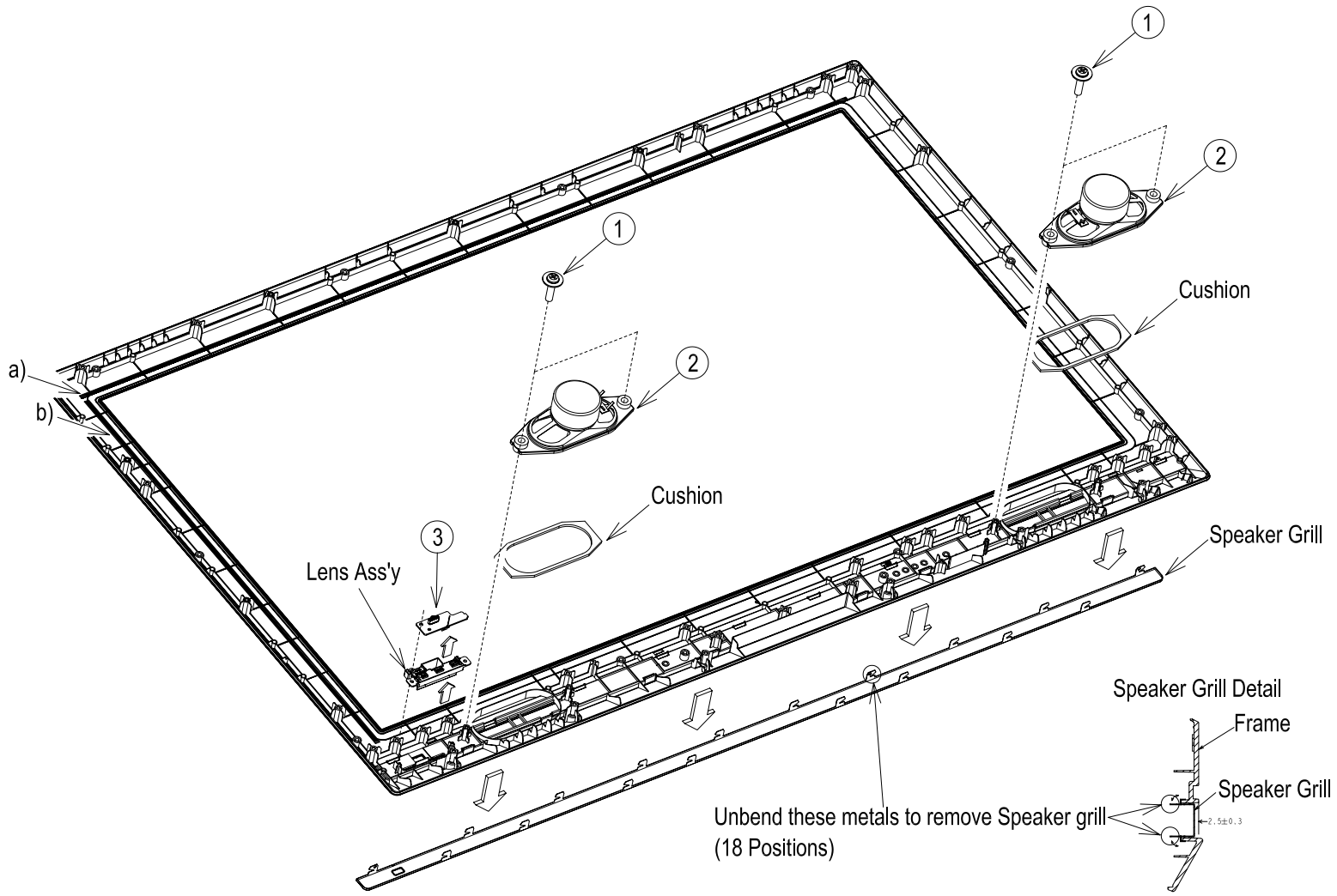
b) Gasket 20-10-200 P#MF02502

c) Gasket 30-20-30 P#MF02503(2 Pcs.)



FRAME REMOVAL Step 4

① Remove Screw T2B 4*16 P#MJ04013(4 Pcs.)
② Remove Speakers P# GK01671(2 Pcs.)
③ Remove LED PWB P#JP55126
Lens Ass'y
Speaker Grill

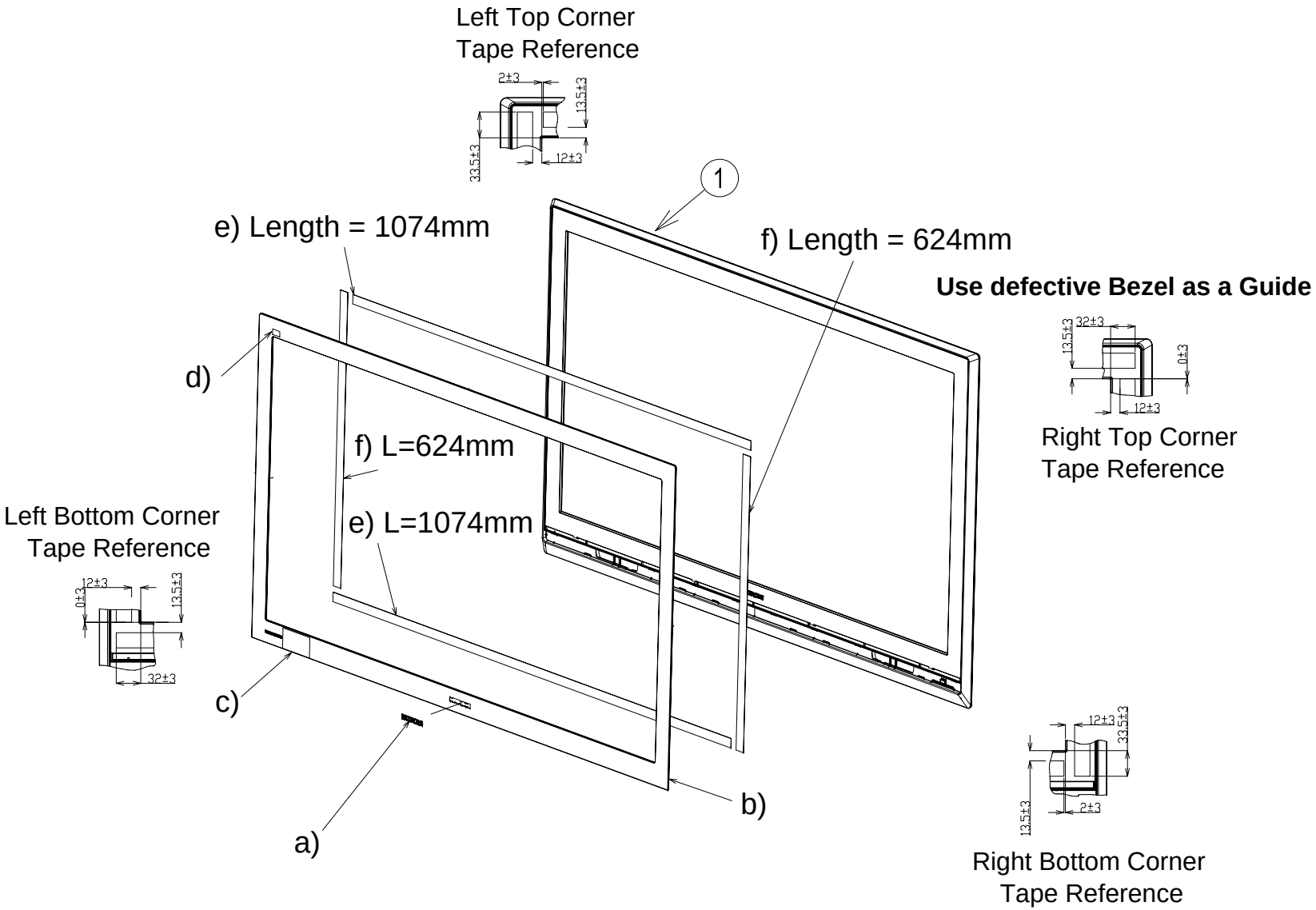


FRAME REMOVAL Step 5

1. Remove Screen Frame (Bezel) P# QD61784 (Frame comes as a complete assembly).
Included in the assembly: a), b), c), d), e) and f).

CH 2

Screen Frame (Bezel) P# QD61784 (Frame comes as a complete assembly).

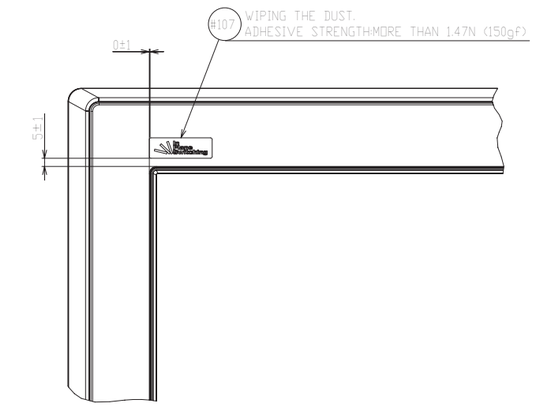


FINAL ASSEMBLY GUIDE

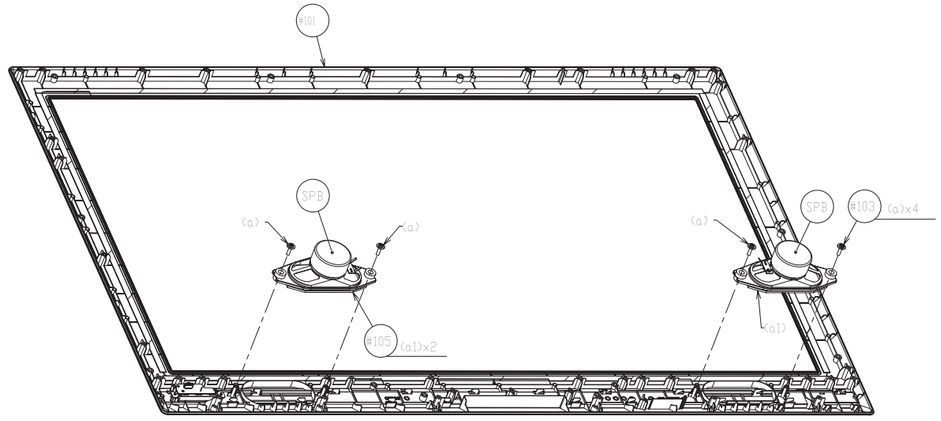
DW3G

SYM.	P.#	DESCRIPTION
#107	QL26251	DW1 LCD IPS LABEL COLOR
#101	QD59181	L47S601 BEZEL ASSY
#103	MJ04013	SCRW T2B_4*16PZ+
#105	MQ02891	DW3 L32 SP CUSHION
SPB	GK01671	SPEAKER 6X12
#120	MF02503	GASKET 30-15-30
#122	MF02502	GASKET 20-10-200
#124	MF02501	GASKET 20-3-50
#112	NA97601	DW3 L47 CORNER BKT
#113	MJ04013	SCRW T2B_4*16PZ+
#125	MF02501	GASKET 20-3-50

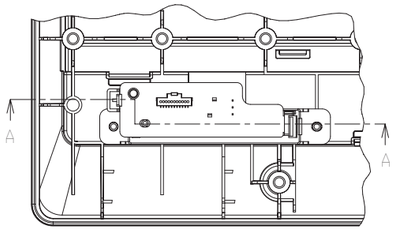
1 BEZEL ASS'Y



FRONT VIEW

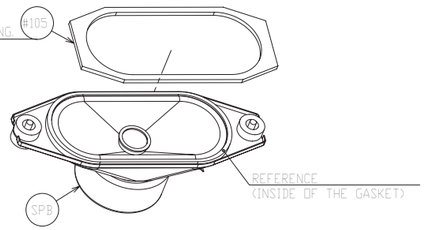


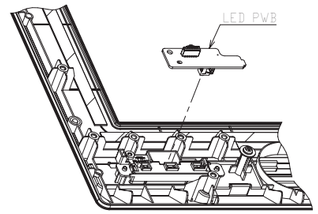
CAUTION

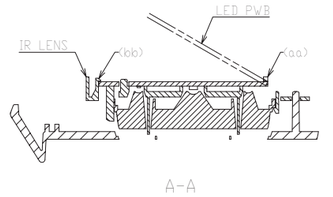


WORK CAUTION

PEEL THE SEPARATOR AND STICK EFFICIENTLY.
BE CARE NOT TO HIT TO THE CONE WHEN STICKING.

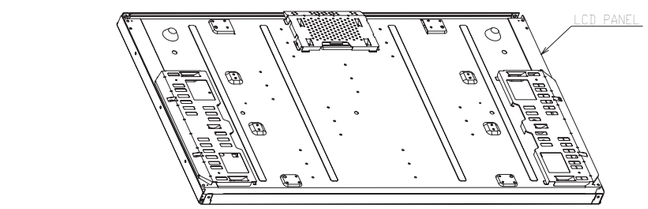






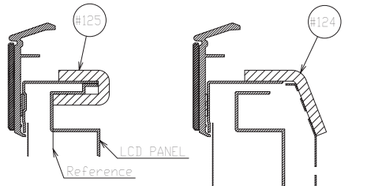
A-A

2 LCD UNIT ASS'Y



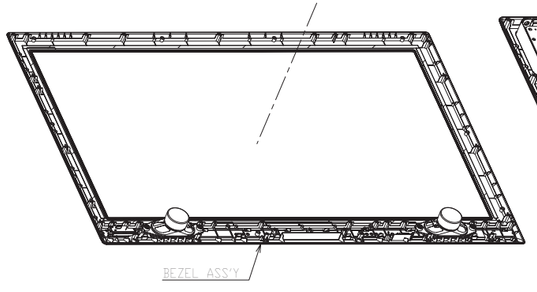
(#120)(#122)(#124)(#125)
WIPING THE DUST.
PEEL THE SEPARATOR,
AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGTH:MORE THAN 0.49N(50gf)

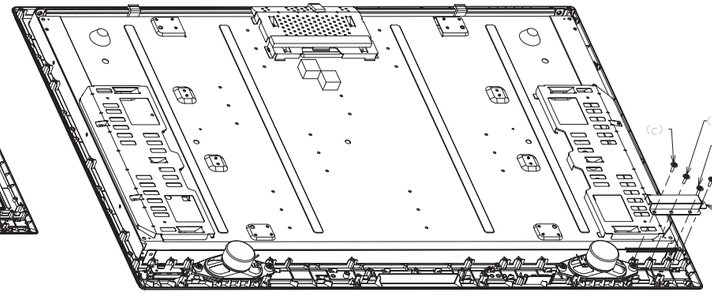
ELECTRIC CONTACT



B2-B2

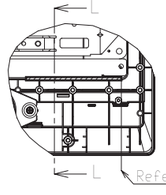
B1-B1

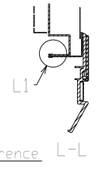


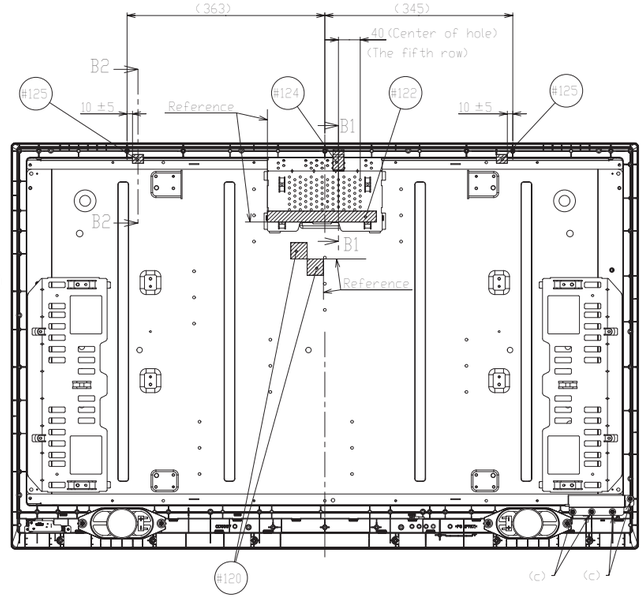


CAUTION

BEFORE #112 ASSEMBLE.

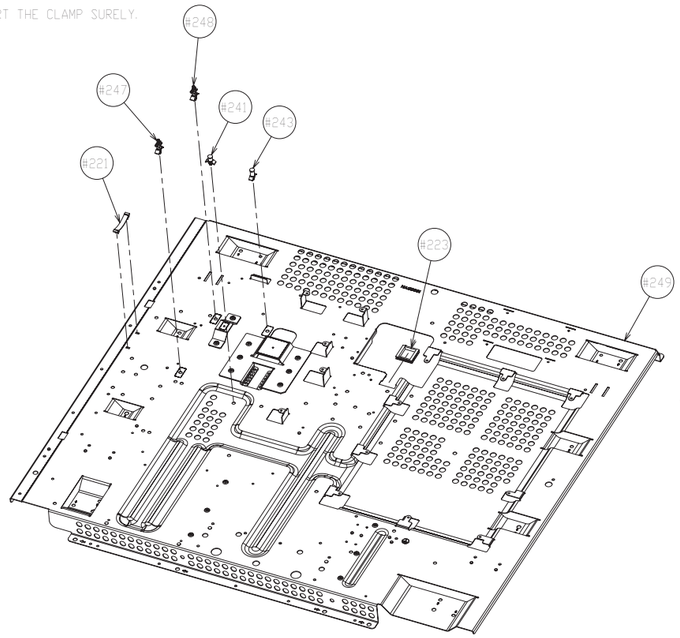


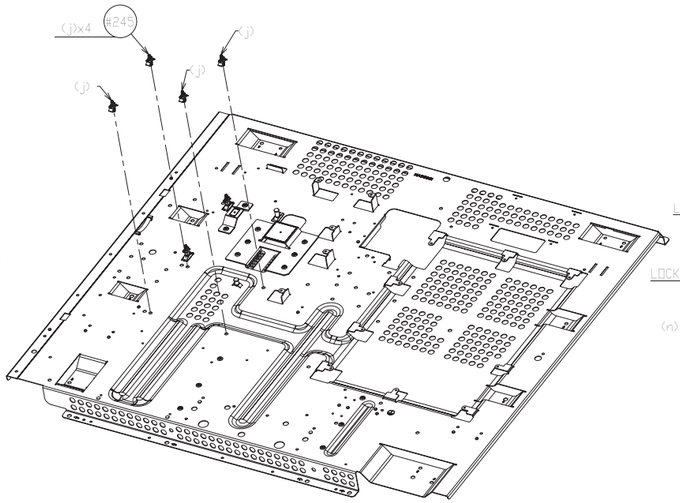


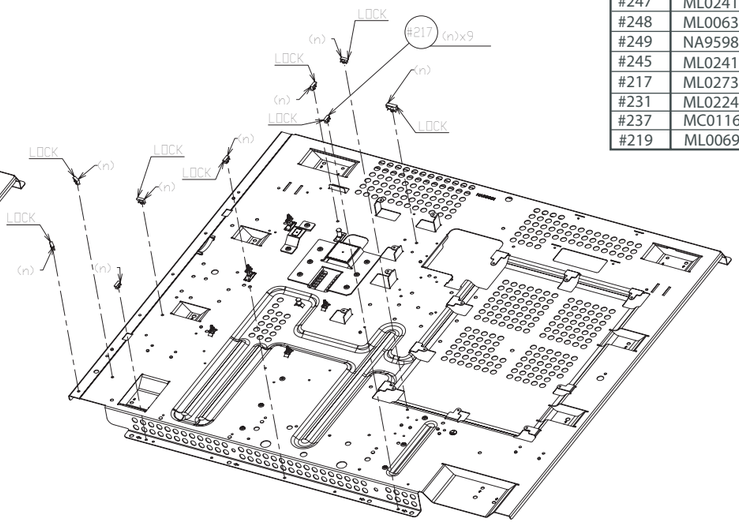


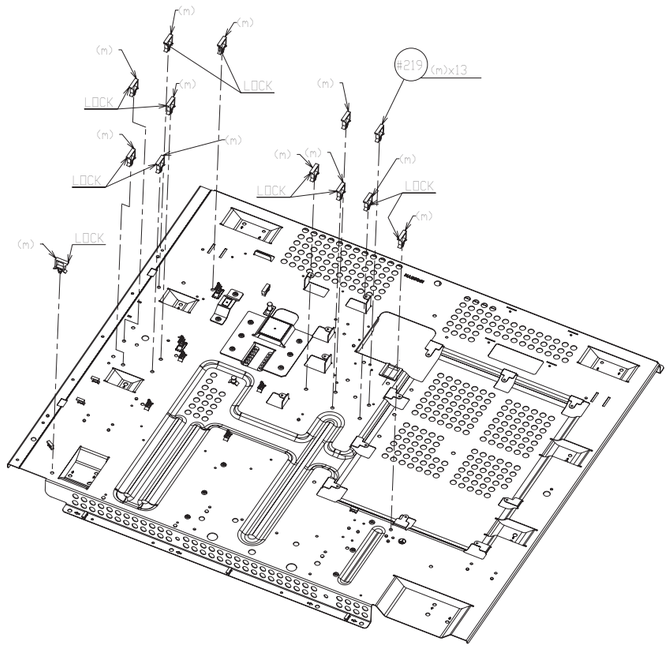
SYM.	P.#	DESCRIPTION
#221	ML02022	FLAT CLAMPER 30
#223	ML02061	EDG SADDLE 1720L
#241	ML04132	PCB SUPPORT PS-6-19
#243	ML03815	PCB SUPPORT PS-8-01
#247	ML02412	FG SPACER 8S
#248	ML00632	SPACER KGLS-8S V0
#249	NA95981	DW3 L47 BASE PLATE
#245	ML02411	FG SPACER 3S
#217	ML02731	WIRE CLAMP WSLT-3.5-2-1-19
#231	ML02241	LOCKING CARD SPACER
#237	MC01164	DW2 MAIN PWB GEL 4.5T
#219	ML00693	WIRE CLAMP LWS-1211

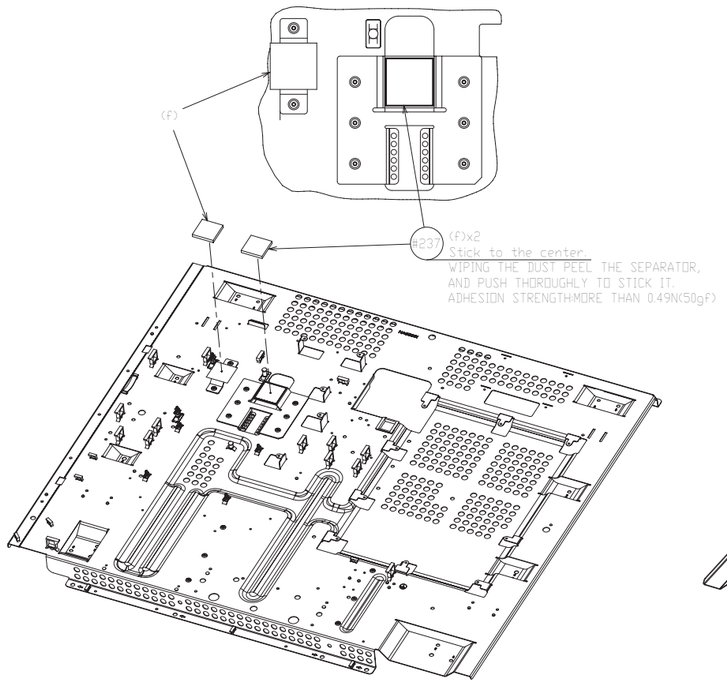
3 BASE PLATE CLAMP ASS'Y
INSERT THE CLAMP SURELY.

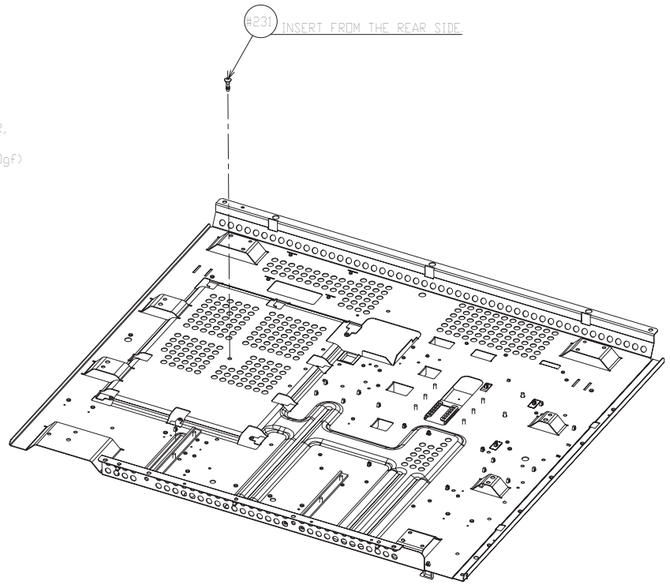






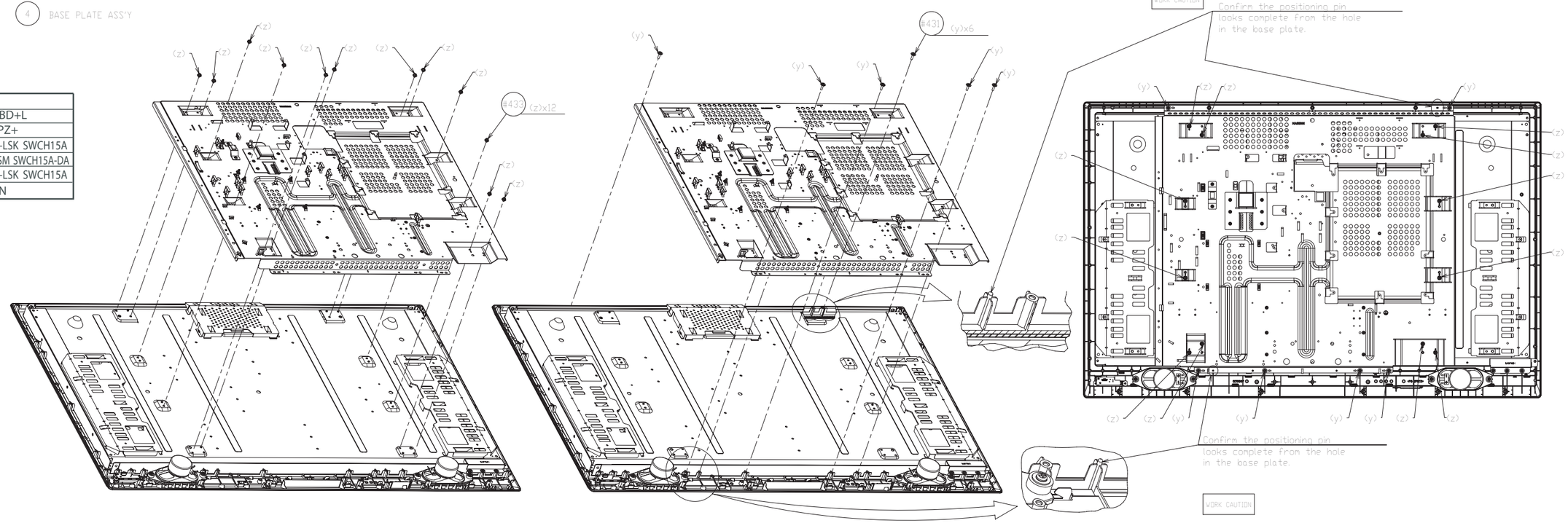




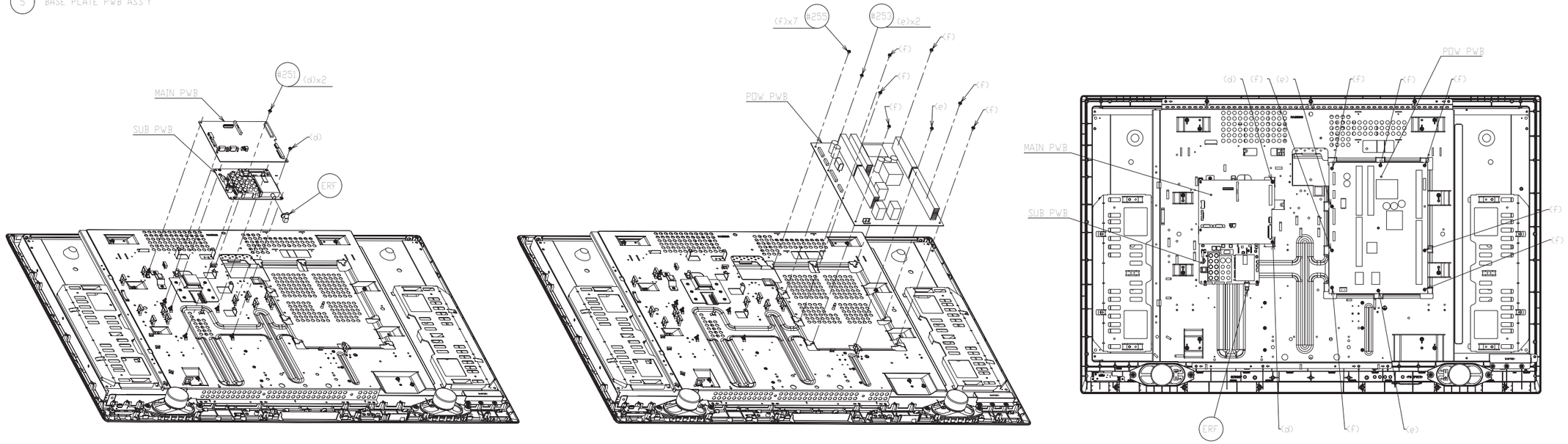


4 BASE PLATE ASS'Y

SYM.	P.#	DESCRIPTION
#433	MJ04049	SCRW M3M_4*6BD+L
#431	MJ04013	SCRW T2B_4*16PZ+
#253	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#255	MJ03646	SCRW M3D_3*8BD+SM SWCH15A-DA
#251	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
ERF	EY02262	PLUG L NIC8014N



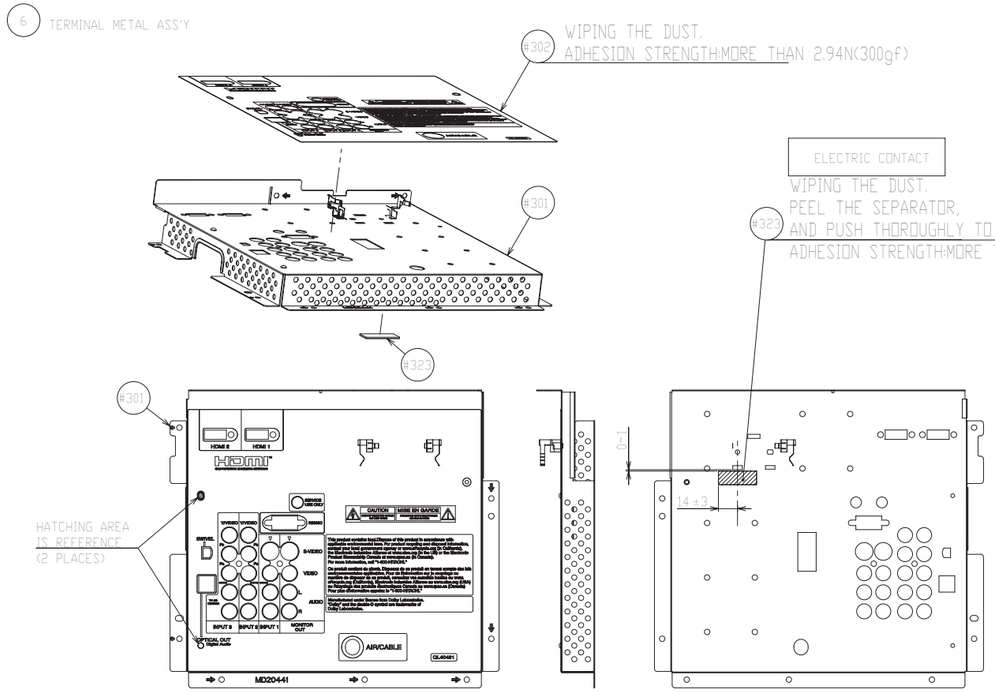
5 BASE PLATE PWB ASS'Y

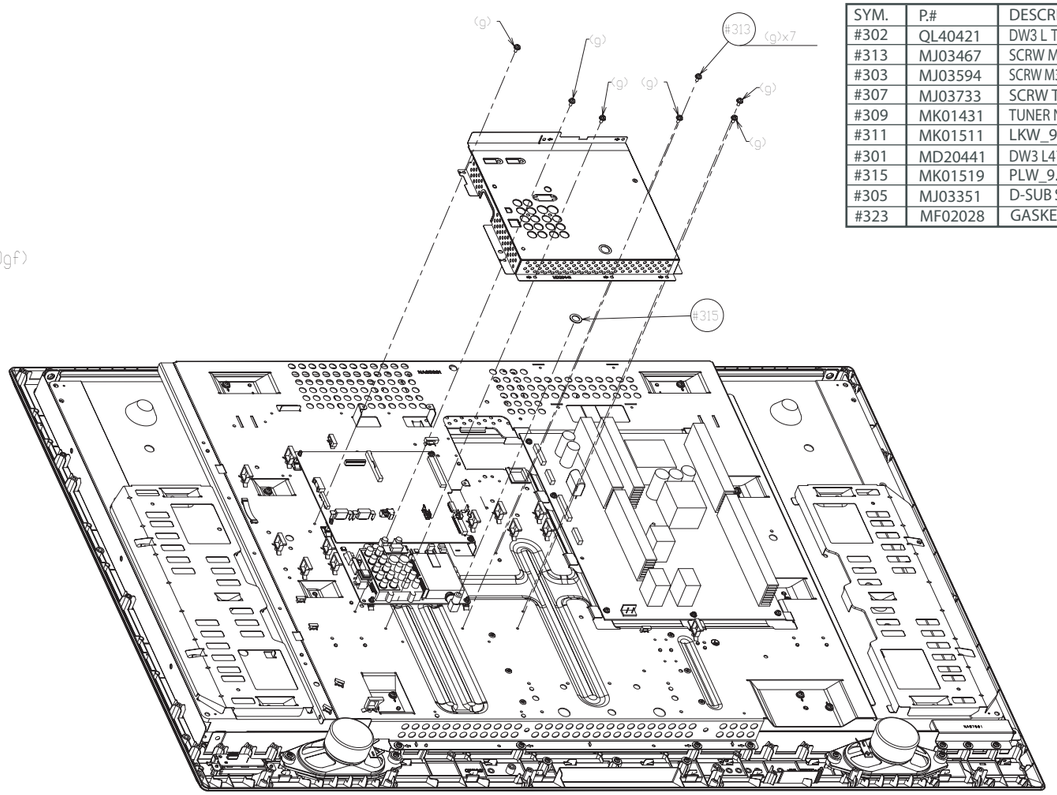


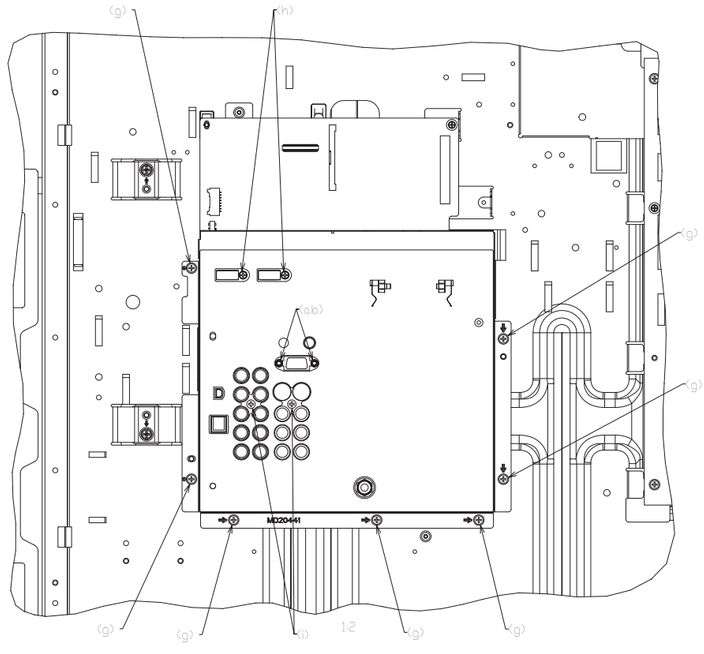
FINAL ASSEMBLY GUIDE

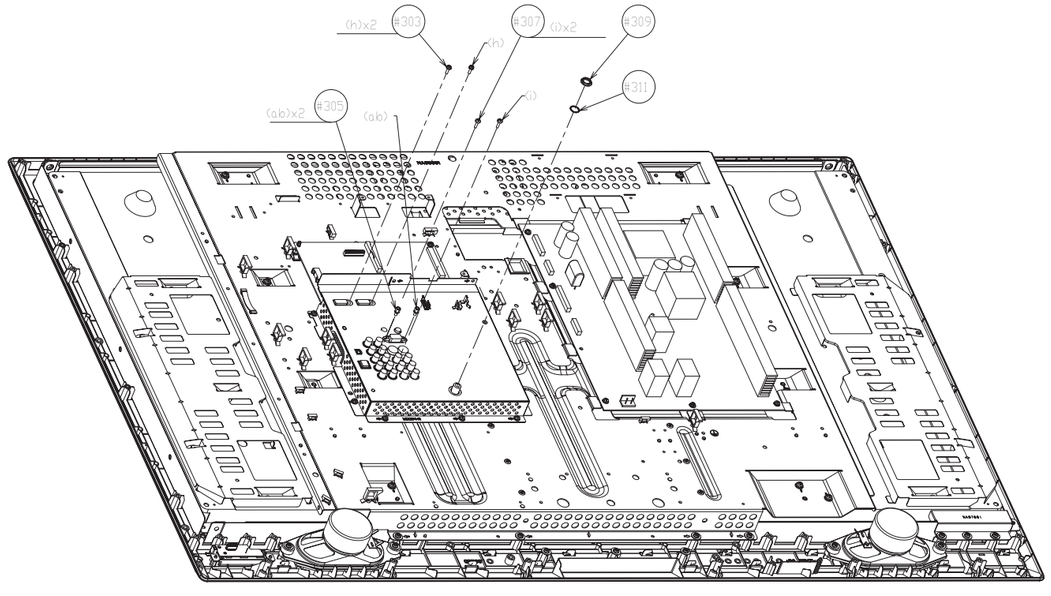
DW3G

SYM.	P.#	DESCRIPTION
#302	QL40421	DW3 L TERM PLATE US
#313	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#303	MJ03594	SCRW M3M_3*6PN+SM Unknown
#307	MJ03733	SCRW T2B_3*10BD+ SWCH12A
#309	MK01431	TUNER NUT WASHER
#311	MK01511	LKW_9.6_11.5
#301	MD20441	DW3 L47 TERM MTL US
#315	MK01519	PLW_9.7_15
#305	MJ03351	D-SUB SCREW WITH SW
#323	MF02028	GASKET 10-1-28 J1G









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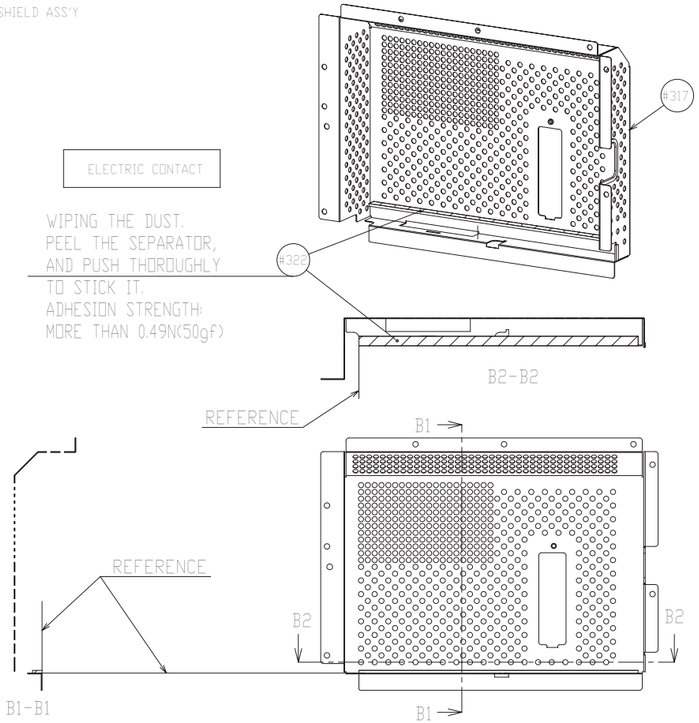
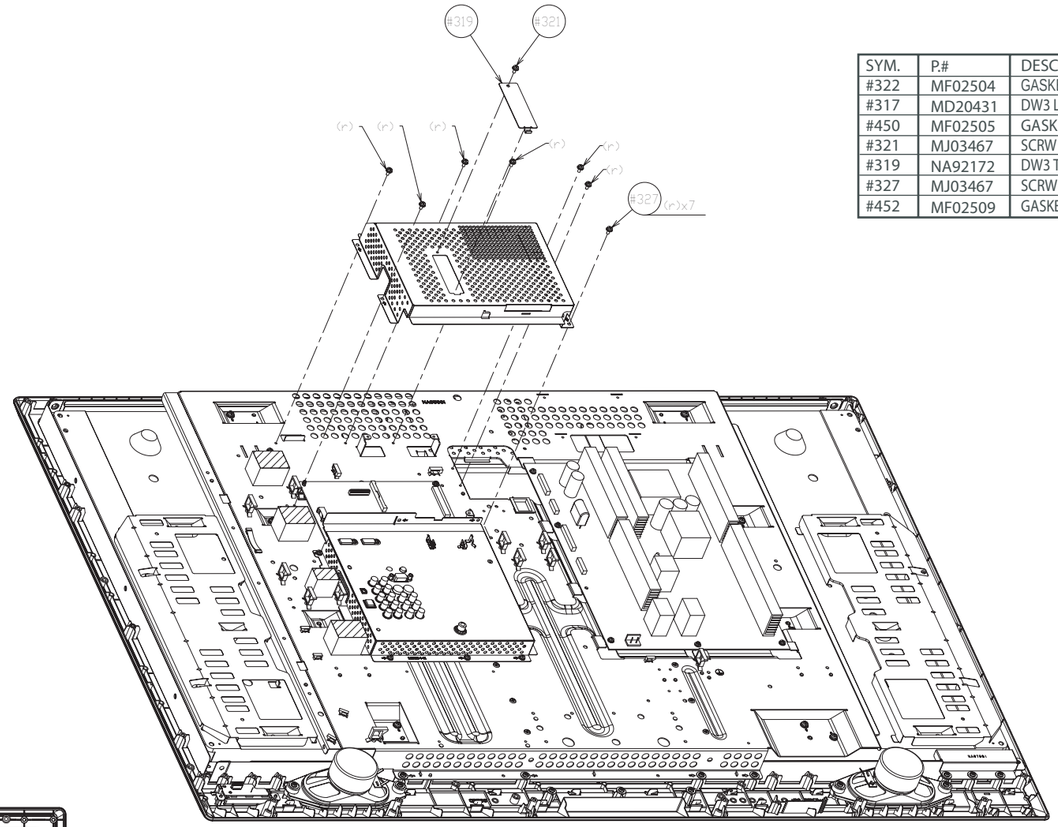
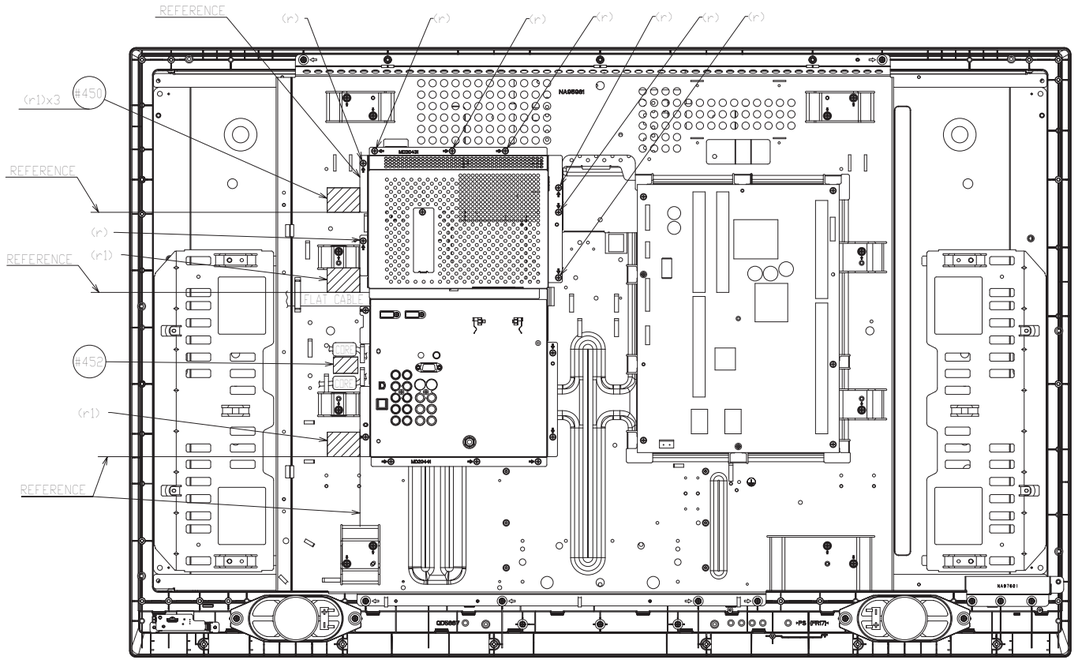
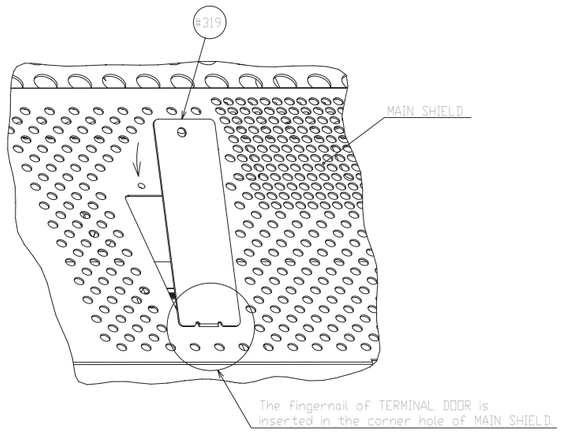
7 MAIN SHIELD ASS'Y





SYM.	P.#	DESCRIPTION
#322	MF02504	GASKET 7-2-210
#317	MD20431	DW3 L47 MAIN SHIELD
#450	MF02505	GASKET 20-30-40
#321	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#319	NA92172	DW3 TERMINAL DOOR
#327	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#452	MF02509	GASKET 30-30-20





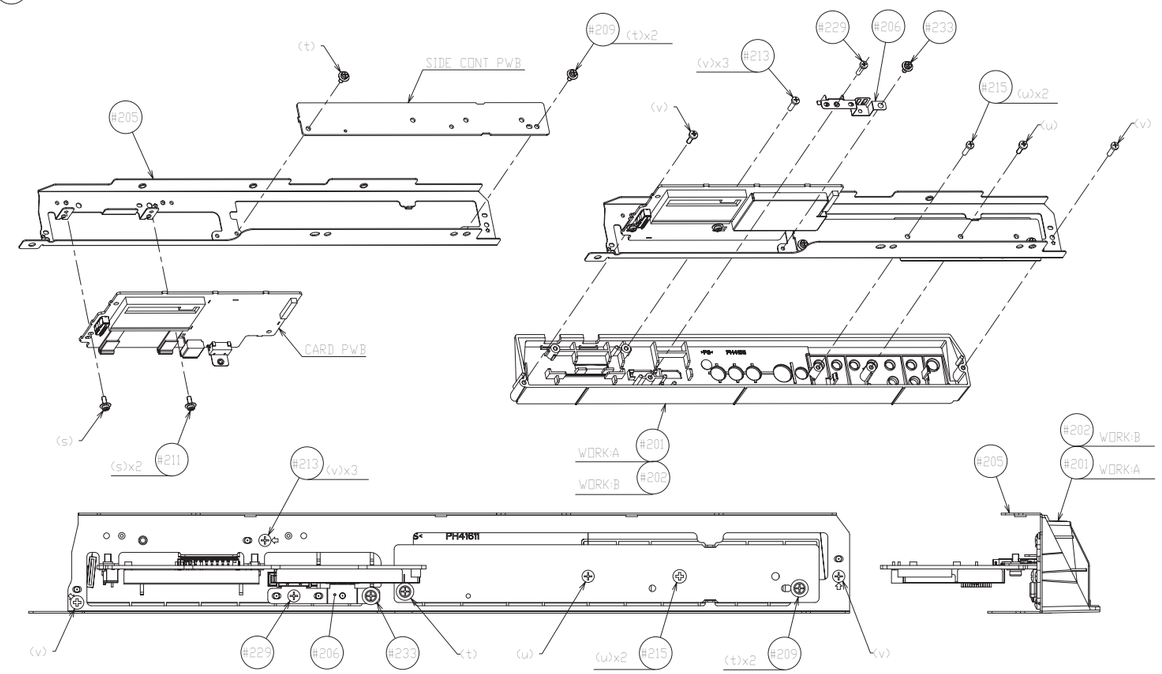
ELECTRIC CONTACT

(#450)(#452) WIPING THE DUST.
PEEL THE SEPARATOR,AND PUSH THOROUGHLY TO STICK IT.
ADHESION STRENGTH:MORE THAN 0.49N(50gf)

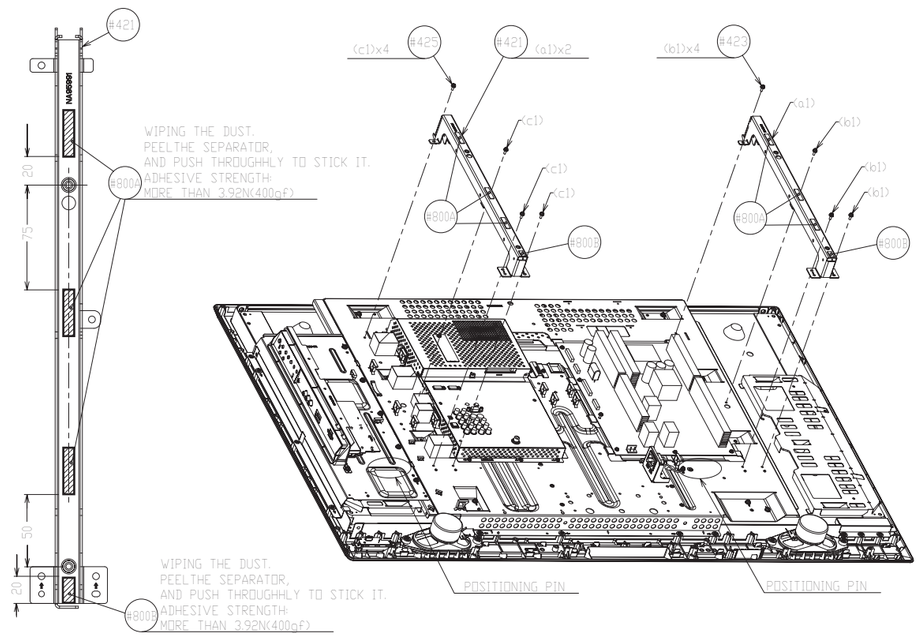
FINAL ASSEMBLY GUIDE

SYM.	P.#	DESCRIPTION
#205	NA91912	DW3 L SIDE P FIX MTL
#209	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#211	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#213	MJ03733	SCRW T2B_3*10BD+ SWCH12A
#201	PH41975	DW3 L S-CONT US S601
#202	PH41976	DW3 L S-CONT US V651
#229	MJ03733	SCRW T2B_3*10BD+ SWCH12A
#206	NA93911	DW3 L SIDE P SUP BKT
#233	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#215	MJ03733	SCRW T2B_3*10BD+ SWCH12A
#421	NA95991	DW3 L47 MAIN FRAME
#800A	MS02124	HIMERON 40*10*0.9
#800B	MS02123	HIMERON 20*10*0.9
#425	MJ04061	SCRW M3C 4*10PN+LS
#423	MJ04061	SCRW M3C 4*10PN+LS
#407	MJ04049	SCREW M3M_4*6BD+L
#403	ML02731	WIRE CLAMP WSLT-3.5-2-1-19
#431	MJ04013	SCRW T2B_4*16PZ+
#411	MJ04061	SCRW M3C 4*10PN+LS
#443	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#441	NA97811	DW3 L LVDS BRACKET
#413	NA96001	DW3 L47 AC HOLDER
#415	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#417	MJ04061	SCRW M3C 4*10PN+LS
E901	EP00411	AC INLET SK-1015(F1-0)
EFAC	EF28361	2P VT-FASTON (#250) L=170MM CONNE.
#401	NA96471	DW3 L47 BASE SIDE METAL

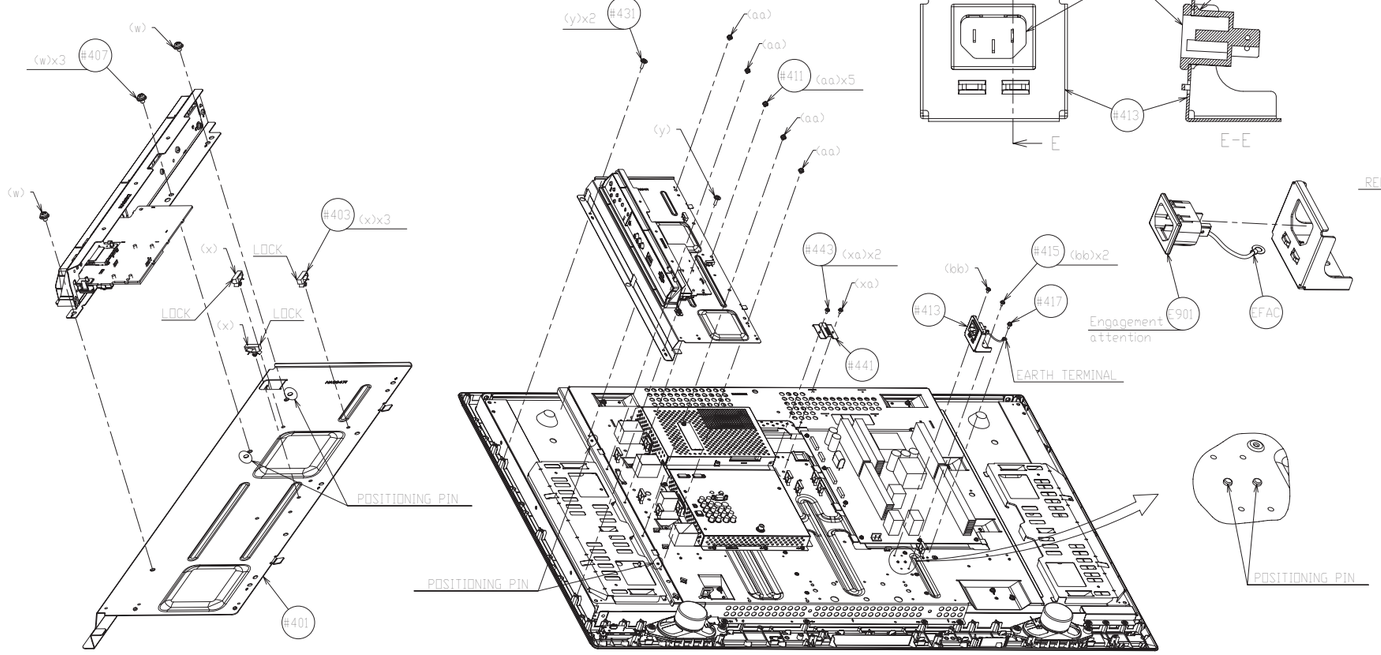
8 SIDE INPUT UNIT ASS'Y

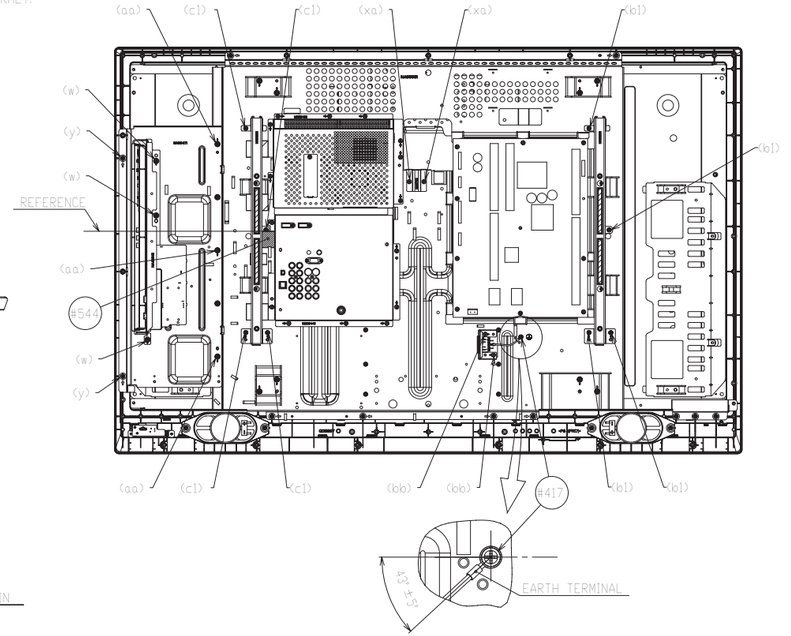


10 MAIN FRAME ASS'Y

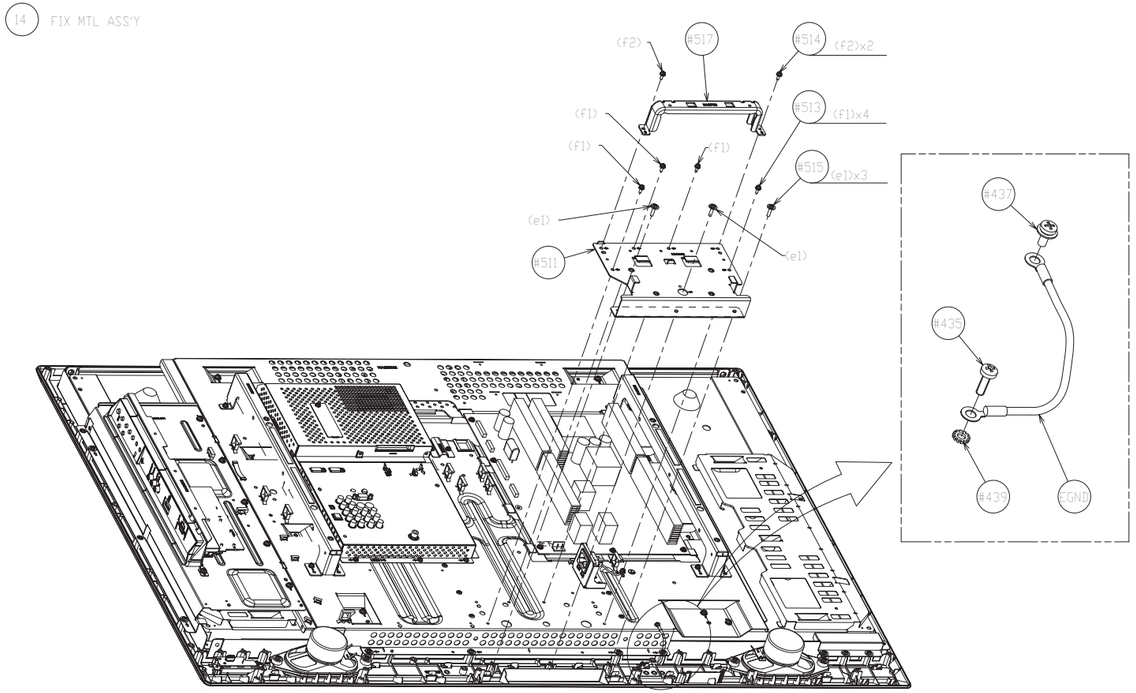


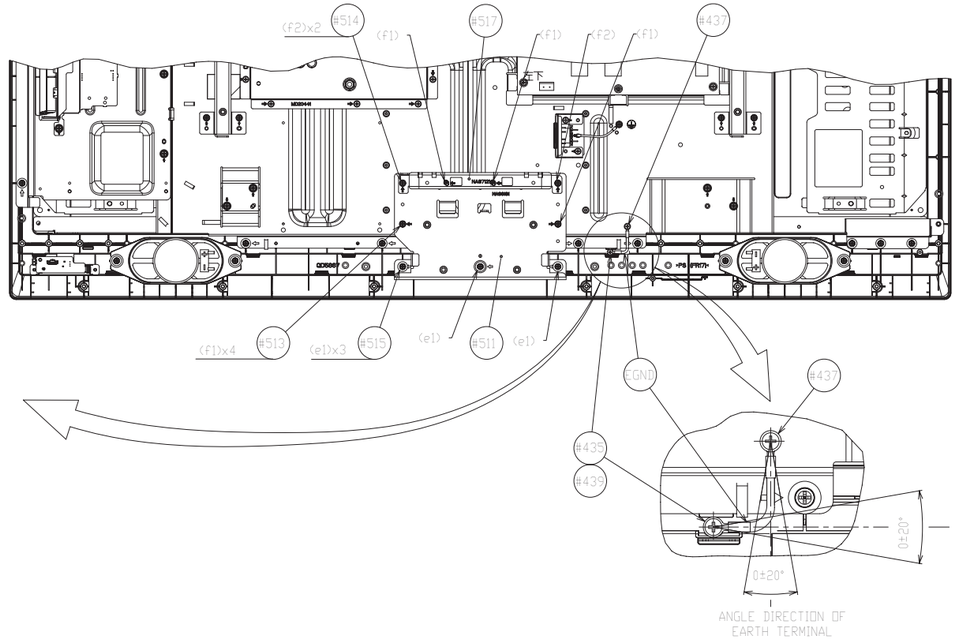
9 SIDE UNIT PLATE ASS'Y



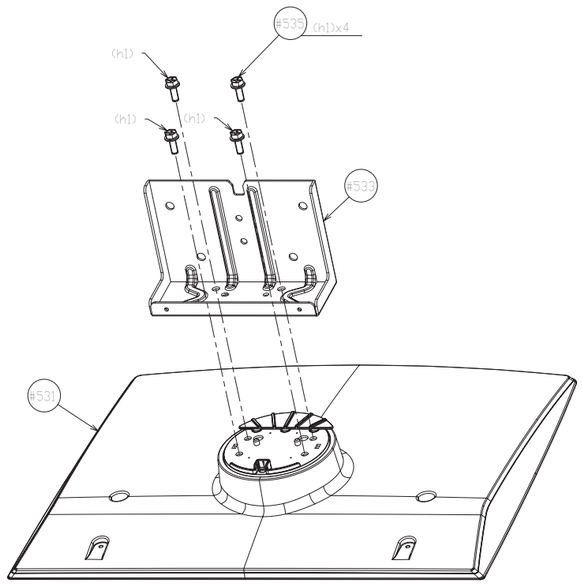


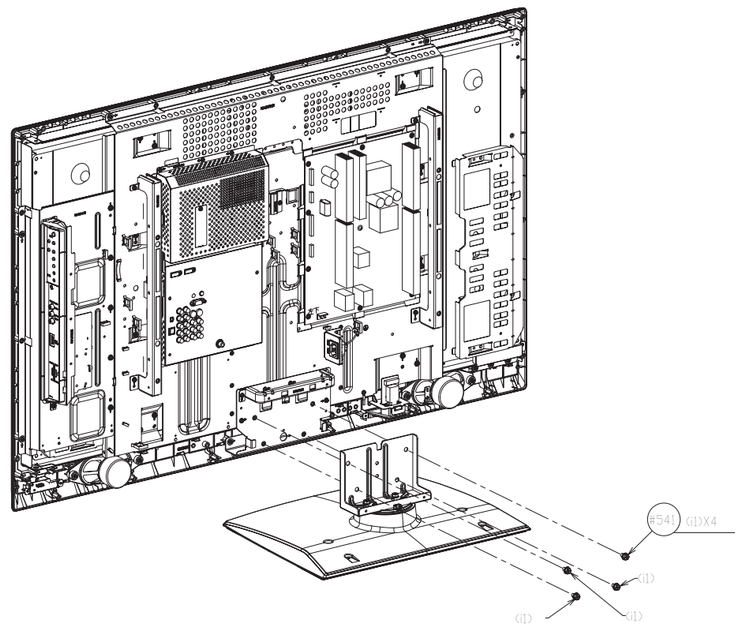
14 FIX MTL ASS'Y





15 STAND ASS'Y

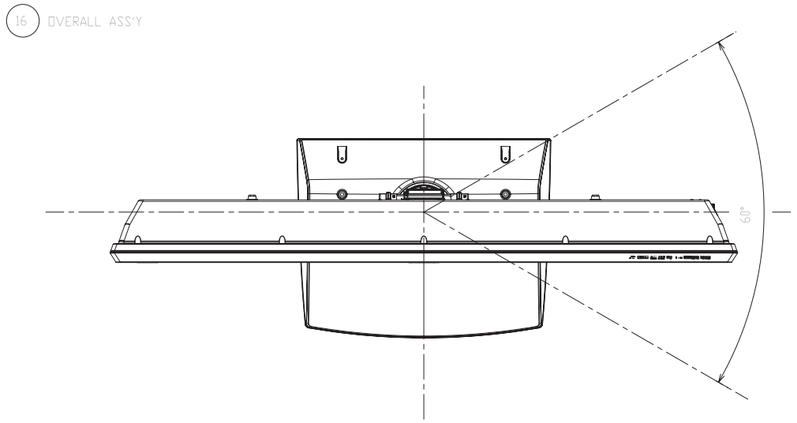


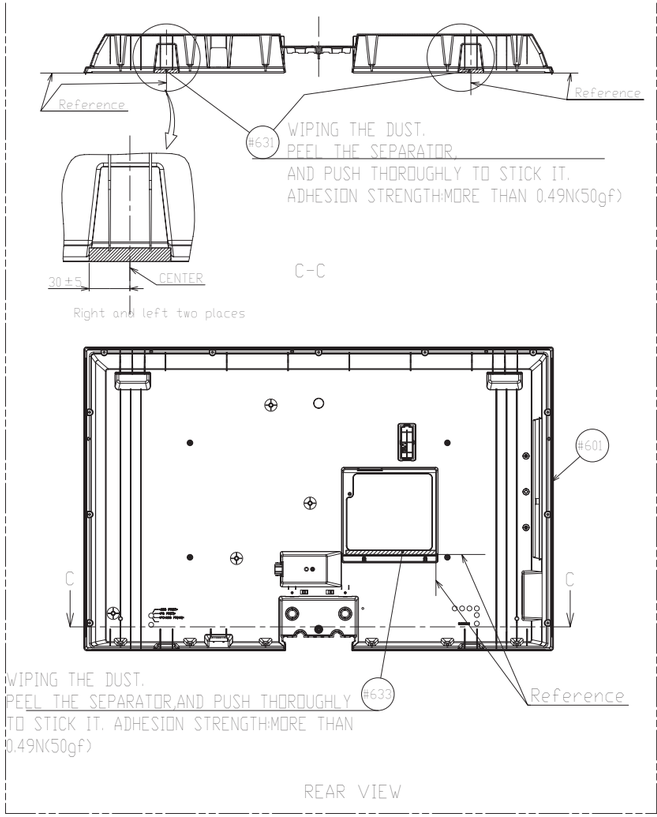


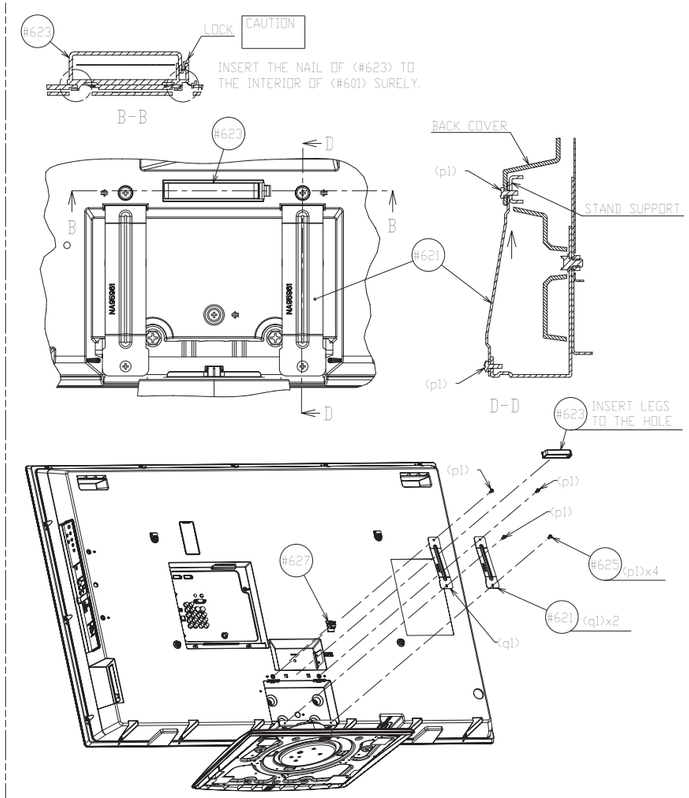
SYM.	P.#	DESCRIPTION
#511	NA96161	DW3 L47 STAND FIX
#517	NA97121	DW3 L47 ST SUPPORT2
#514	MJ04053	SCRW M3S 4*16PN+SM
#513	MJ04061	SCRW M3C 4*10PN+LS
#515	MJ04013	SCRW T2B_4*16PZ+
#437	MJ03467	SCRW M3E_3*8PN+LSK SWCH15A
#435	MJ03733	SCRW T2B_3*10BD+ SWCH12A
EGND	EF24041	CO-01T-T0R0-101
#439	MK01501	LKW_3.2_6.5
#535	MJ03693	SCRW M3M_6*18HX+SM SWRM12A
#533	NA95951	DW3 L47 STAND METAL
#531	QJ04573	DW3 L STAND ASSY NA
#541	MJ03693	SCRW M3M_6*18HX+SM SWRM12A

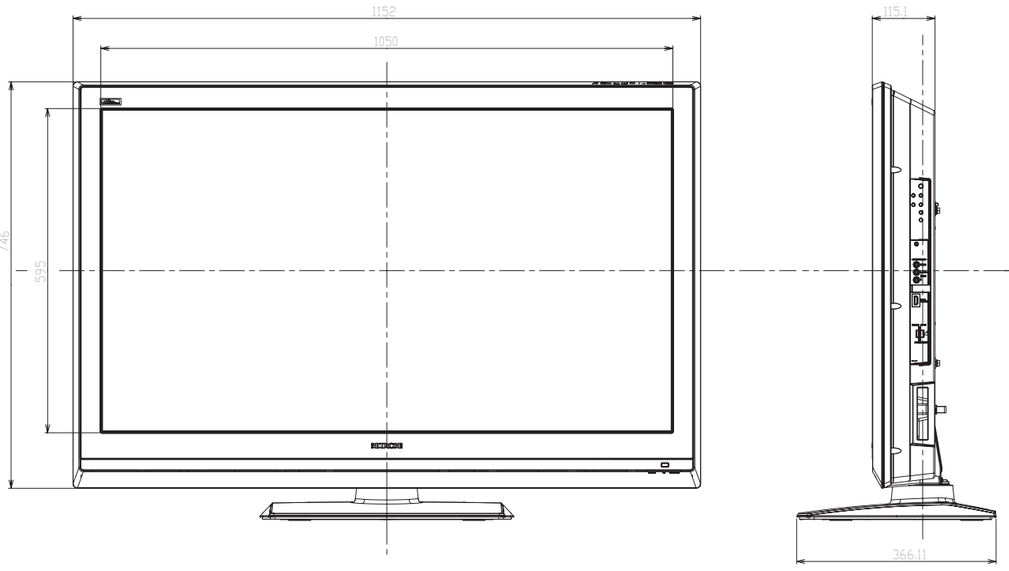
FINAL ASSEMBLY GUIDE

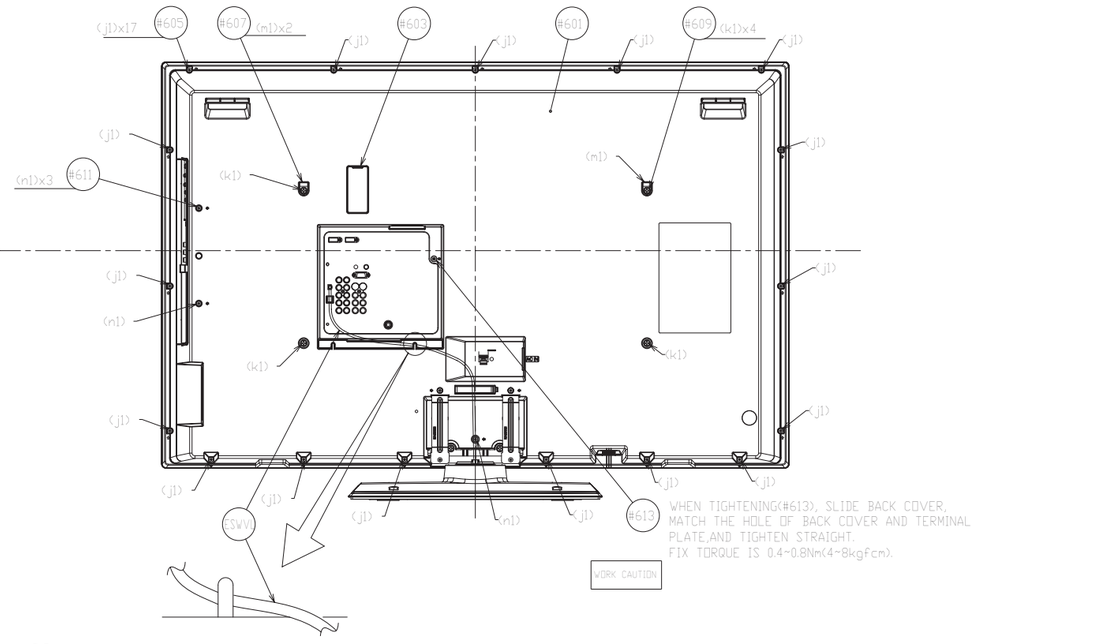
SYM.	P.#	DESCRIPTION
#631	MS02066	DW3 L HIMELON 60
#601	QD58881	DW3 L47 BACK COVER
#633	MS02069	DW3 L HIMELON 10X220X1
#623	ML03381	WIRE CLAMP 1564
#621	NA95961	DW3 L47 ST SUPPORT
#627	ML02253	CKS CLAMP 10L(SUB)
#625	MJ03727	SCRW M3D_4*10BD+ SWCH18A
#605	MJ03568	SCRW T2D_4*16BD+ SWCH16-18A
#607	ML02112	M6 CABLE CLAMP HX
#611	MJ03727	SCRW M3D_4*10BD+ SWCH18A
#603	PH42131	DW3 L BECKHAM COVER
#609	MJ03693	SCRW M3M_6*18HX+SM SWRM12A
#613	MJ03649	SCRW M3D_3*10BD+SM SWCH15A-DA
ESWVL	EW08434	8P PLUG CORDE, L=470MM











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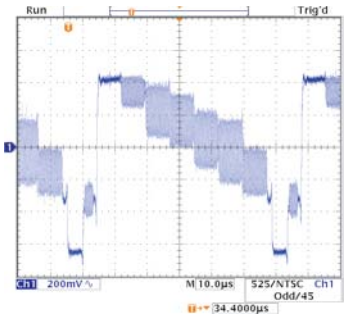
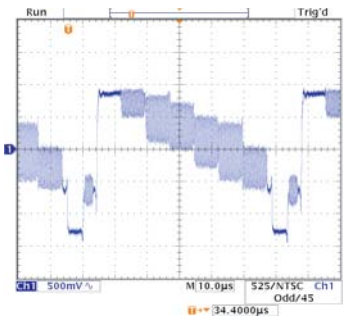
WAVEFORMS

Numbers inside circle correspond to locations shown in the circuit diagram. Waveforms taken using a Color Bar signal with H sync 31 khz and V. sync 60 hz and a X10 probe.
Signal amplitude and DC level shown at Δ and @ respectively.

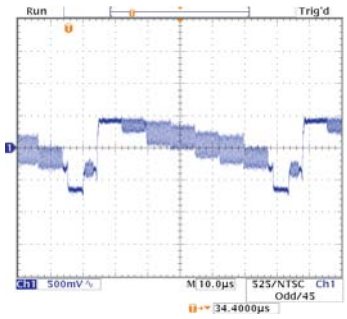
(1) UT01 Pin 13 TunerM_CV (out)



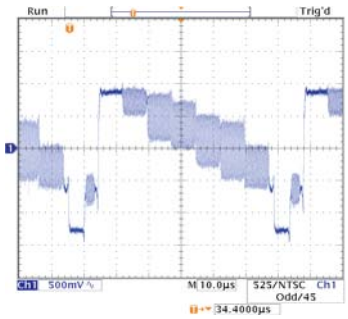
(2) JY02 Pin 4 Monitor-Out



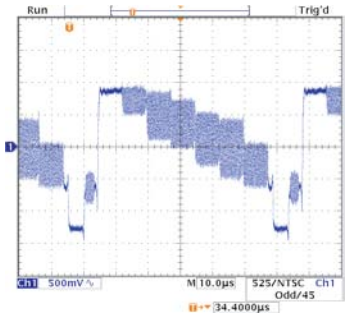
(3) I001 Pin 26 TunerM_CV (in)



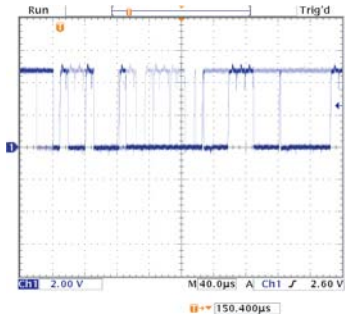
(4) I001 Pin 28 MAIN_Y/V (out)



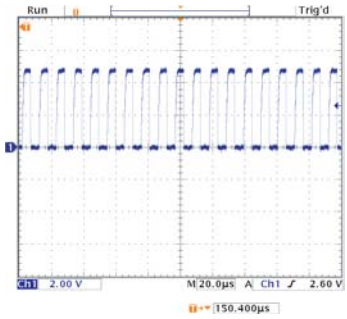
(5) I001 Pin 32 SUB_Y/V (out)



(6) I001 Pin 44 I^2C DATA



(7) I001 Pin 45 I^2C CLK



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DC VOLTAGES

Symbol	Pin No.	Voltage
CN101	1	5.4
	2	0.0
	3	0.0
	4	0.0
	5	3.3
	6	3.3
	7	5.3
	8	3.3

Symbol	Pin No.	Voltage
CN201	1	23.8
	2	23.8
	3	23.8
	4	23.8
	5	23.8
	6	0.0
	7	0.0
	8	0.0
	9	0.0
	10	0.0
	11	1.6
	12	3.3
	13	0~3.3
	14	3.3

Symbol	Pin No.	Voltage
CN202	1	23.8
	2	23.8
	3	23.8
	4	23.8
	5	23.8
	6	0.0
	7	0.0
	8	0.0
	9	0.0
	10	0.0
	11	1.6
	12	0.0

Symbol	Pin No.	Voltage
CN203	1	12.1
	2	12.1
	3	0.0
	4	0.0
	5	3.3
	6	3.3
	7	0~3.3
	8	3.3
	9	0.0

Symbol	Pin No.	Voltage
CN204	1	5.6
	2	5.6
	3	5.6
	4	0.0
	5	0.0
	6	0.0
	7	10.5
	8	0.0
	9	16.3
	10	0.0
	11	0.0
	12	0.0
	13	13.4
	14	13.4
	15	13.4

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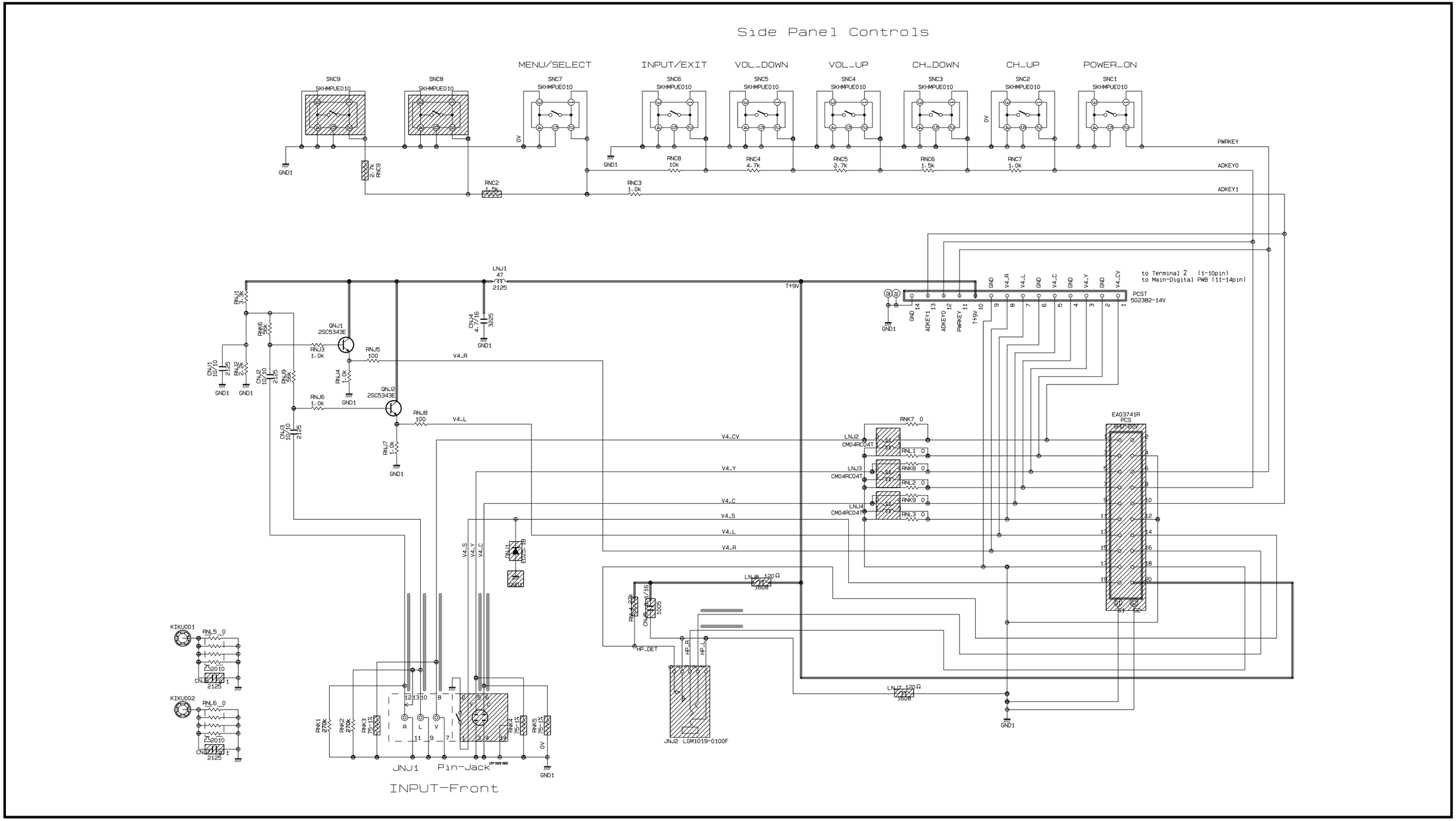
PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

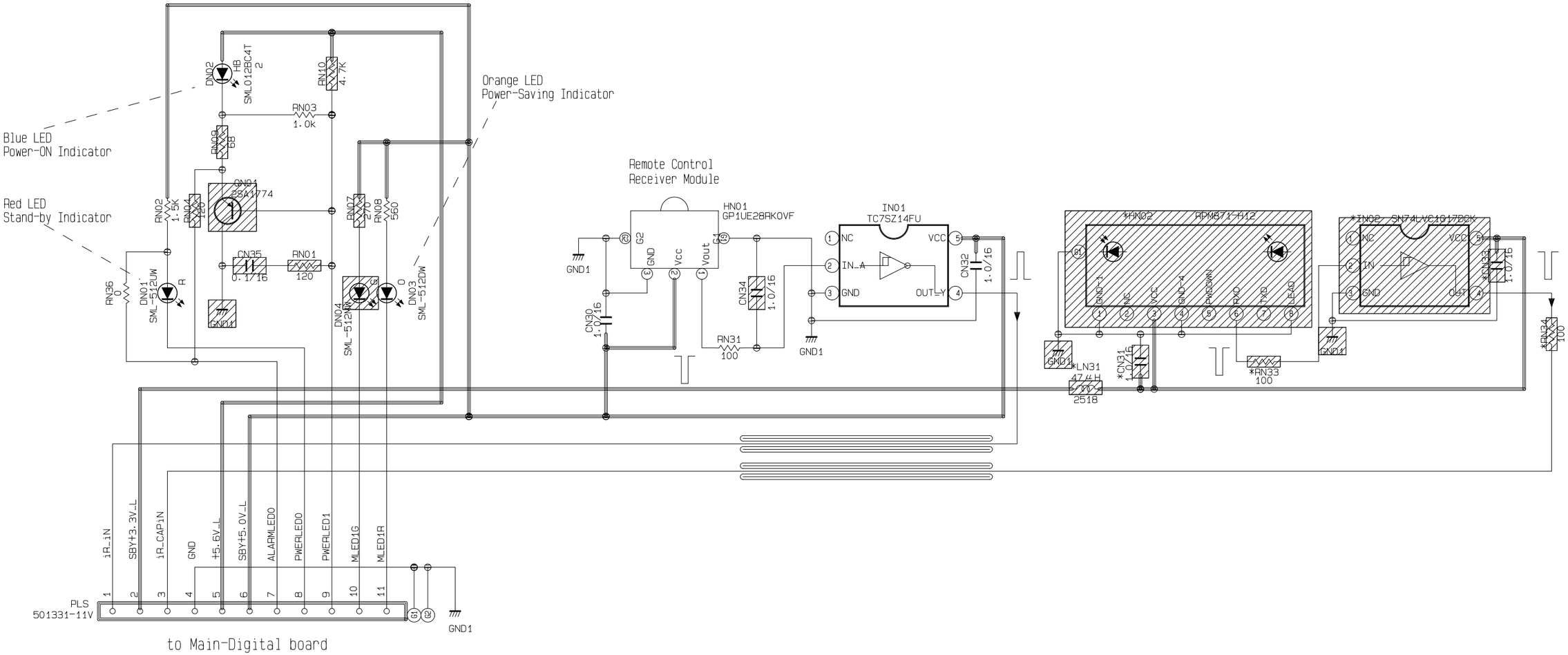


Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

CONTROL

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM



Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

LED

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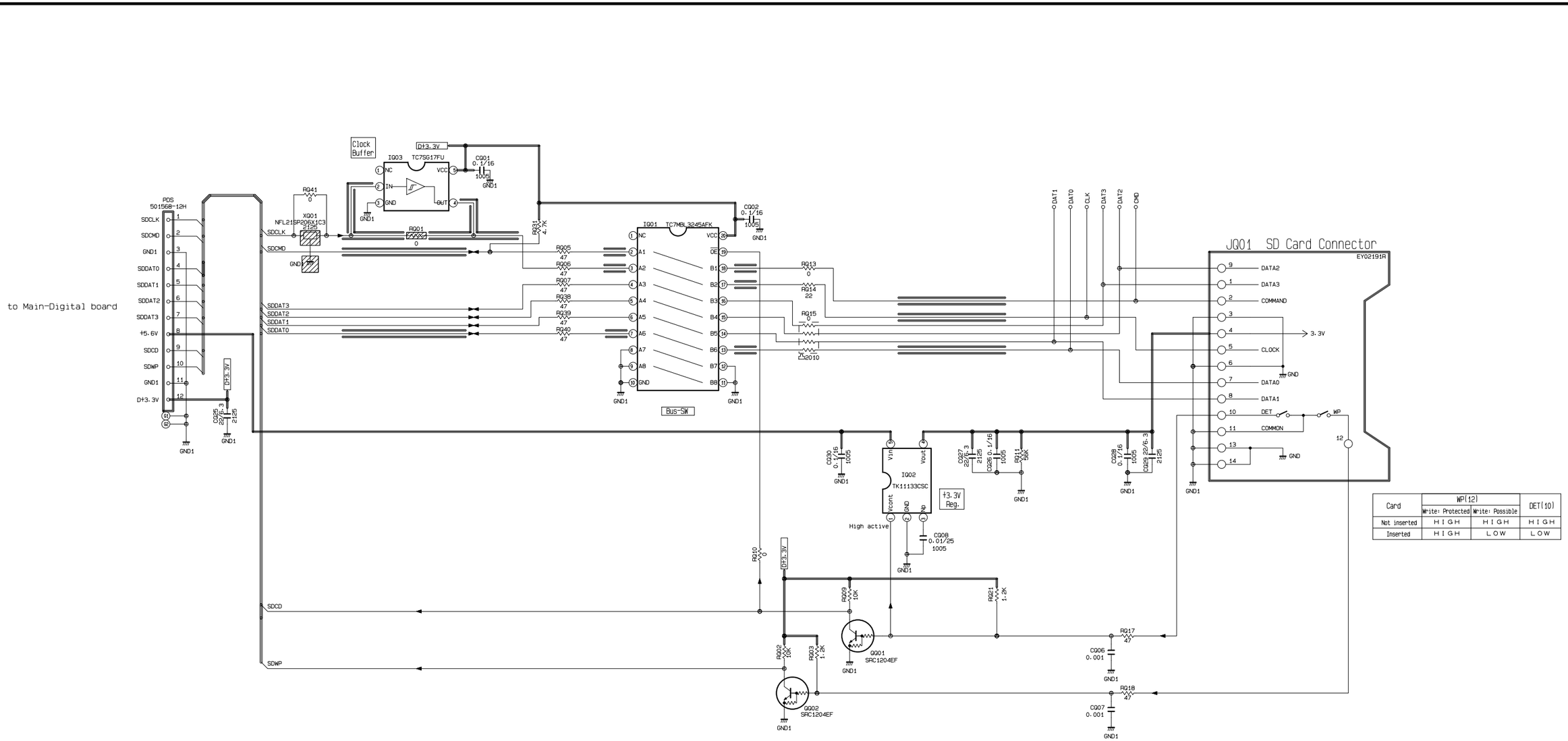
BASIC CIRCUIT DIAGRAM

DW3G
SD 1 of 2



Card	WP(12)		DET(10)
	Write: Protected	Write: Possible	
Not inserted	H I G H	H I G H	H I G H
Inserted	H I G H	L O W	L O W

Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

SD

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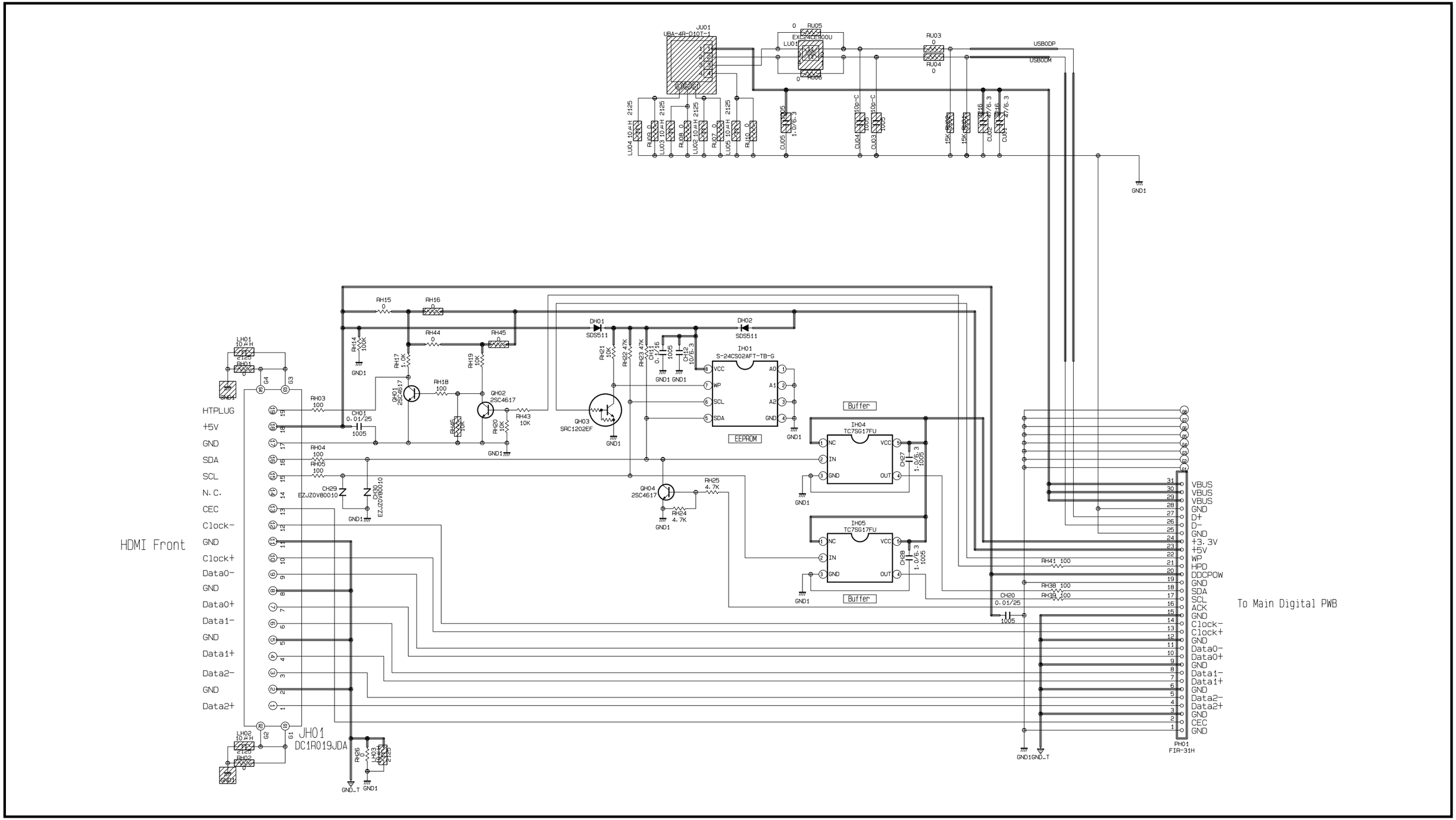
BASIC CIRCUIT DIAGRAM

DW3G
SD 2 of 2

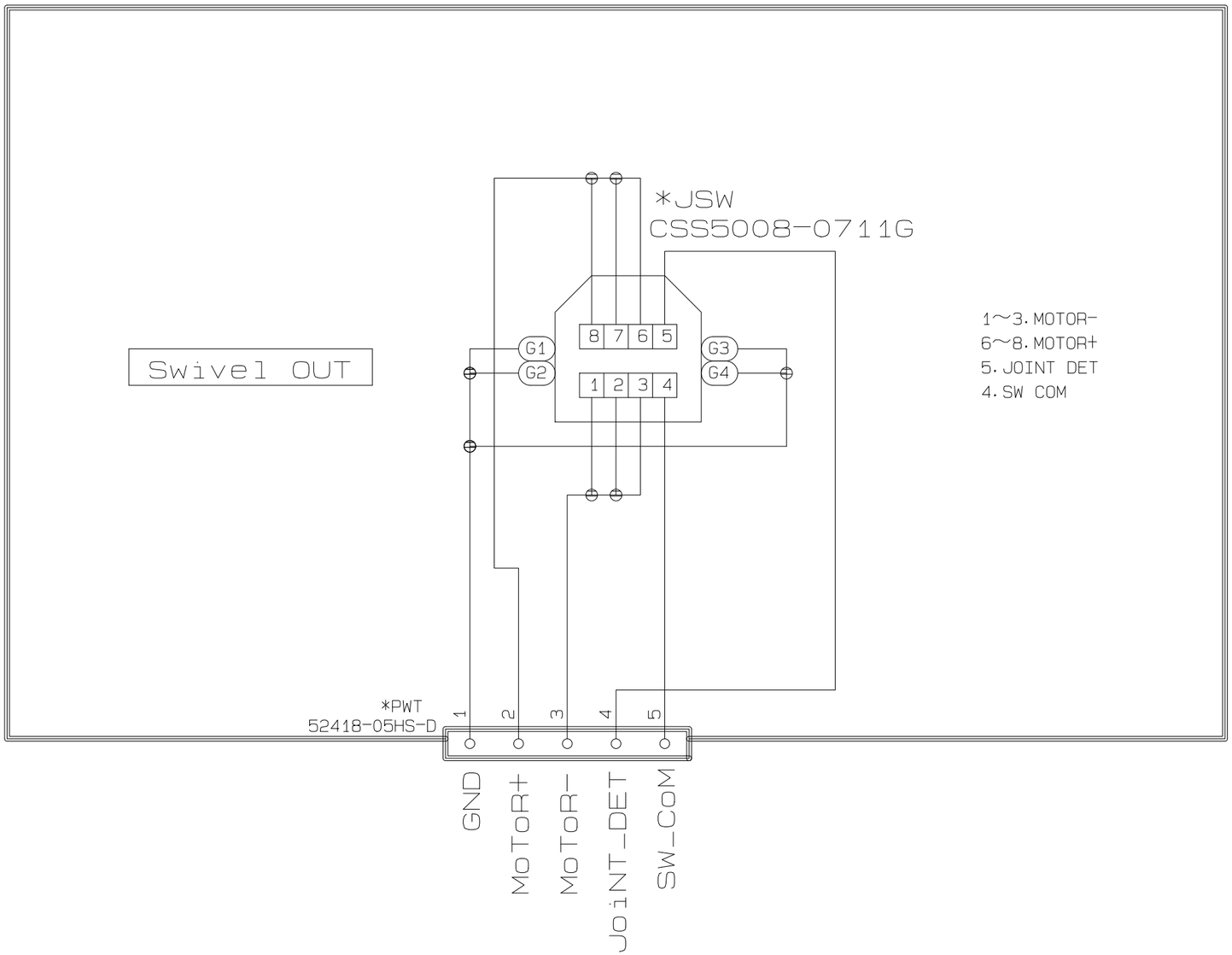


Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

SD

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

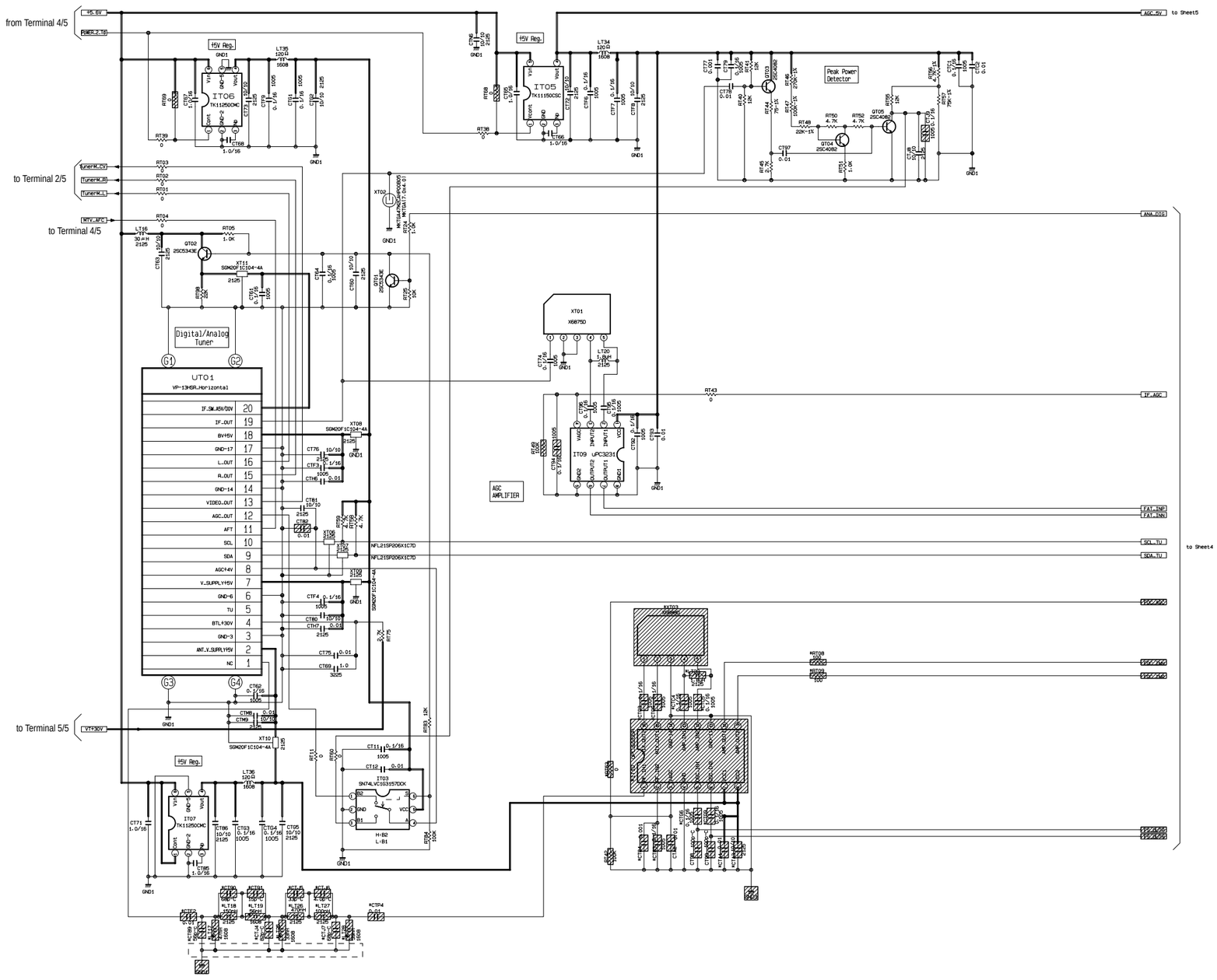


to Terminal page 5

Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.



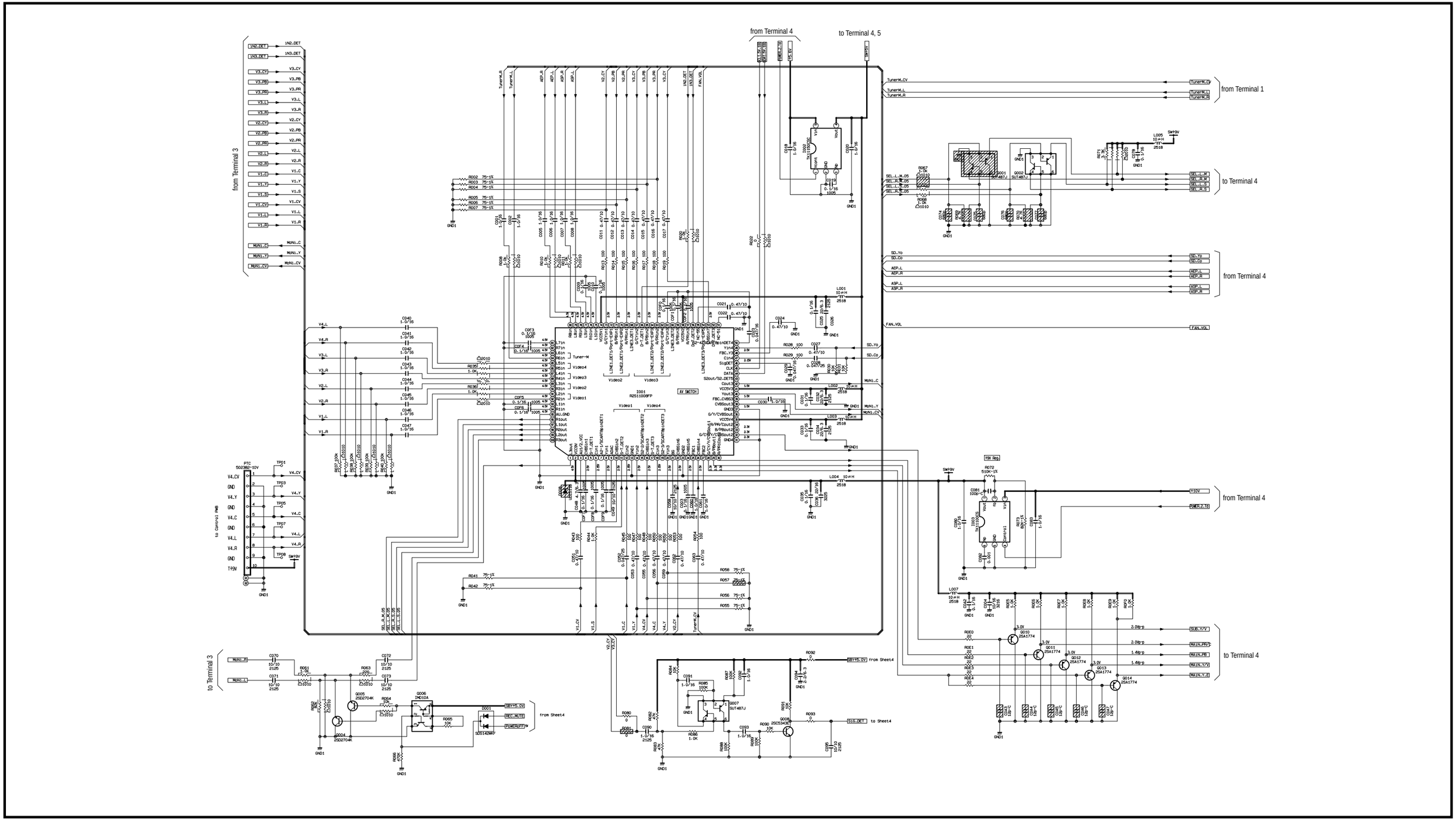
Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

Terminal

BASIC CIRCUIT DIAGRAM

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

DW3G
Terminal 2 of 5



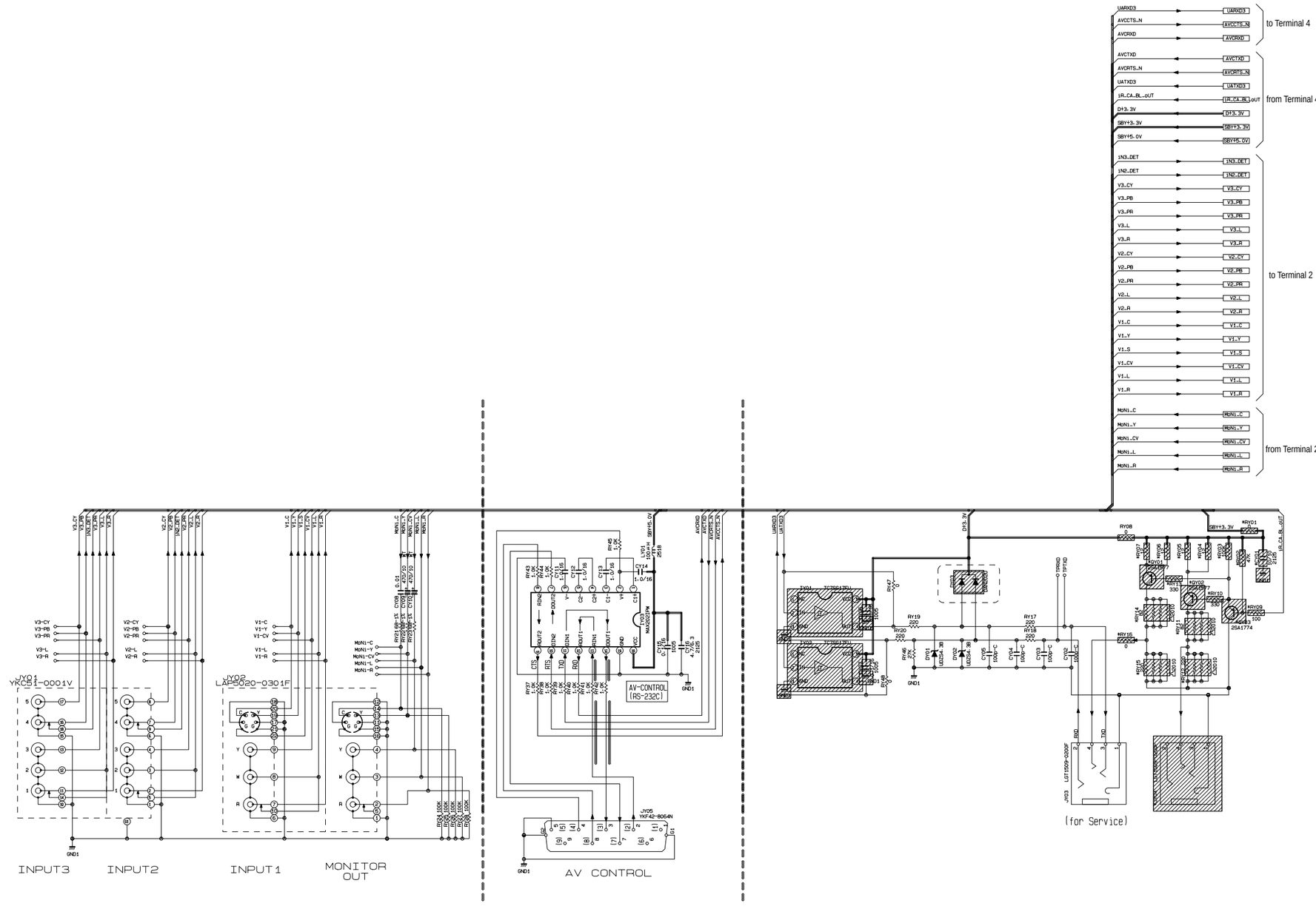
Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

Terminal

PRODUCT SAFETY NOTE: Components marked with a ⚠ and shaded have special characteristics important to safety. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTE of this Service Manual. Don't degrade the safety of the receiver through improper servicing.

BASIC CIRCUIT DIAGRAM

DW3G
Terminal 3 of 5



Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

Terminal

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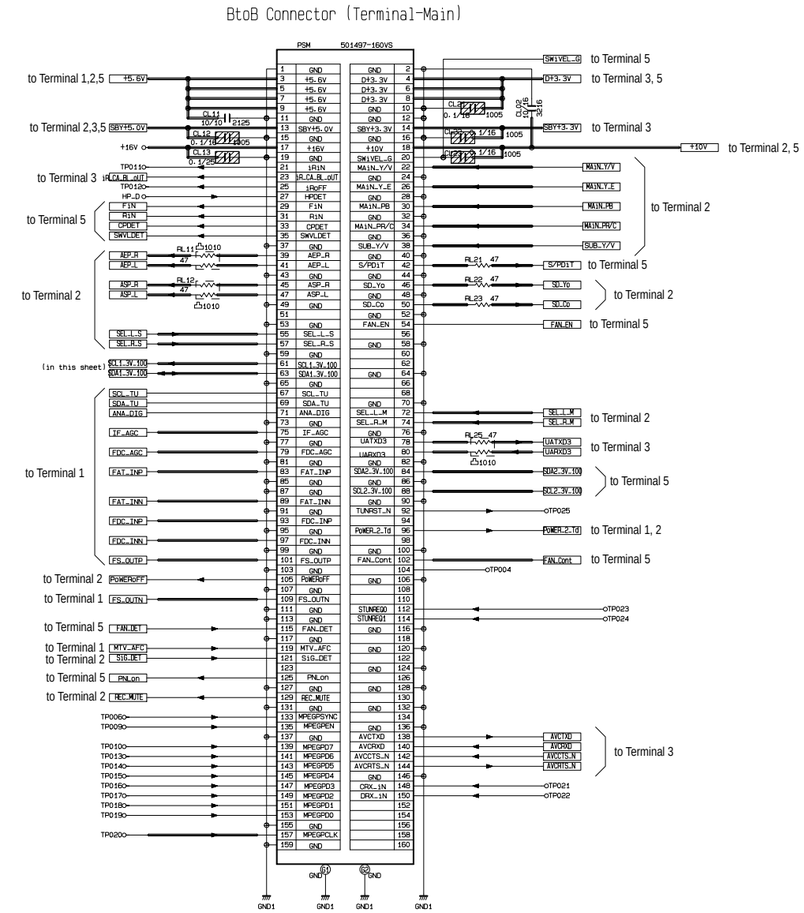
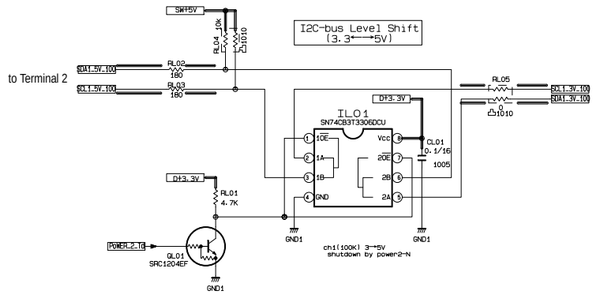
BASIC CIRCUIT DIAGRAM

DW3G
Terminal 4 of 5





Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

Terminal

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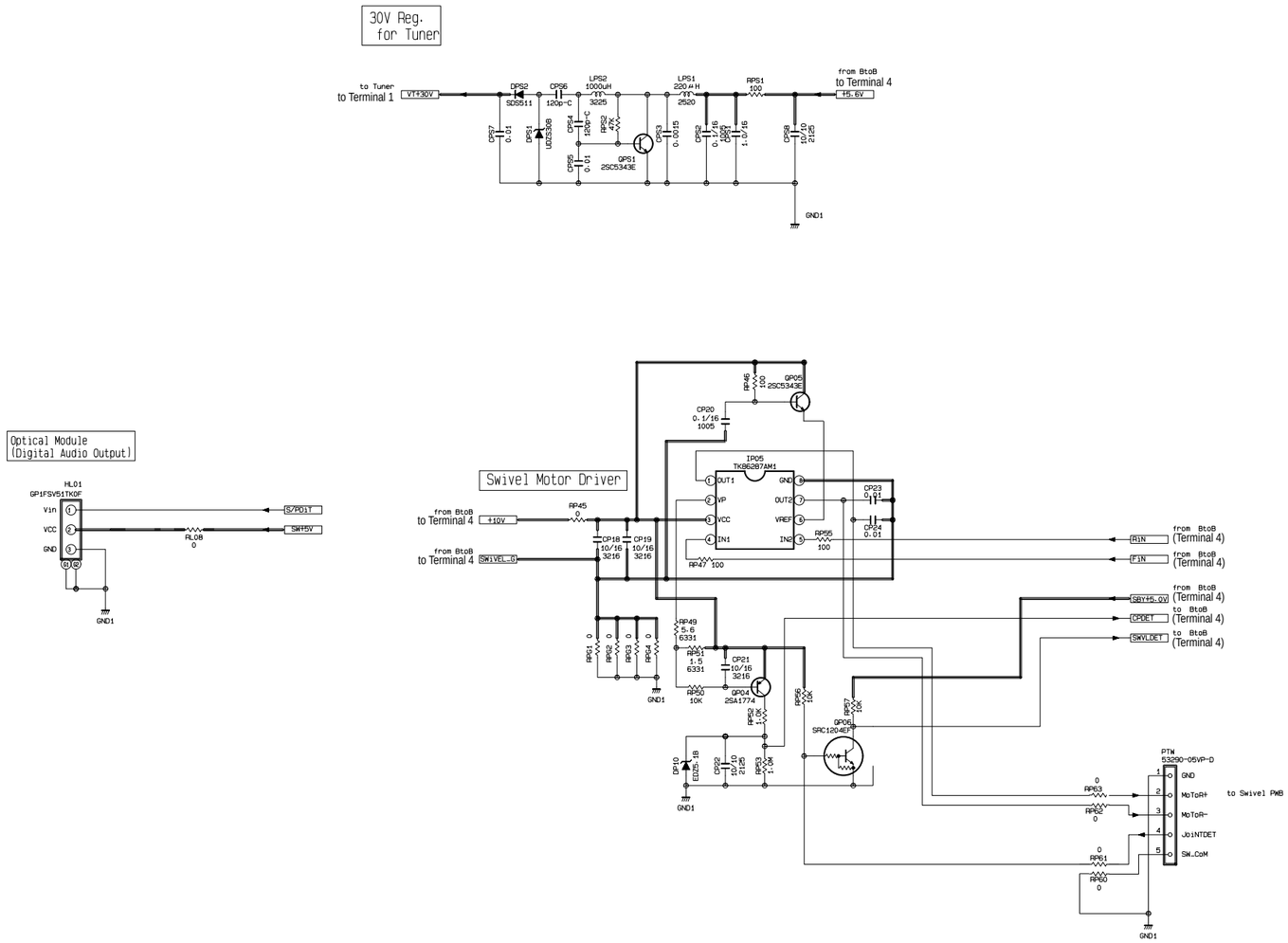
BASIC CIRCUIT DIAGRAM

DW3G
Terminal 5 of 5



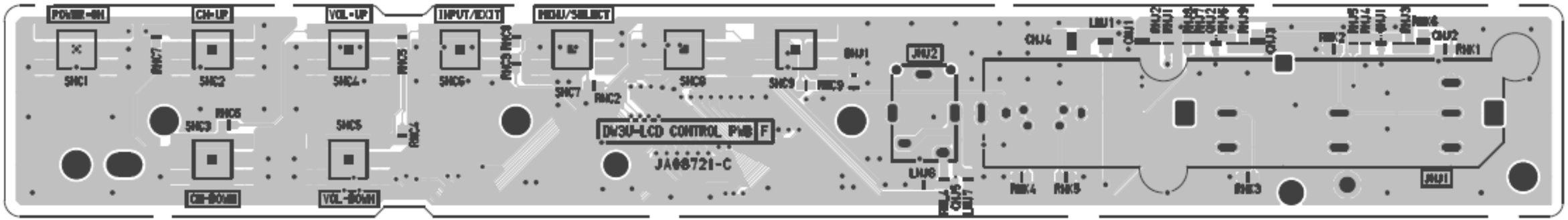
Since this is a basic circuit diagram, the value of the components is subject to change for improvement.

Terminal

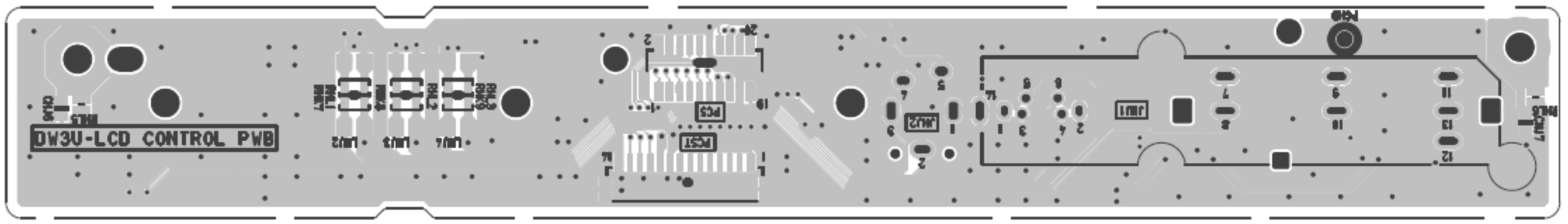
PRINTED CIRCUIT BOARDS

DW3-G "CONTROL PWB" PWB p/n X480430

CONTROL PWB (COMPONENT SIDE)



CONTROL PWB (SOLDER SIDE)



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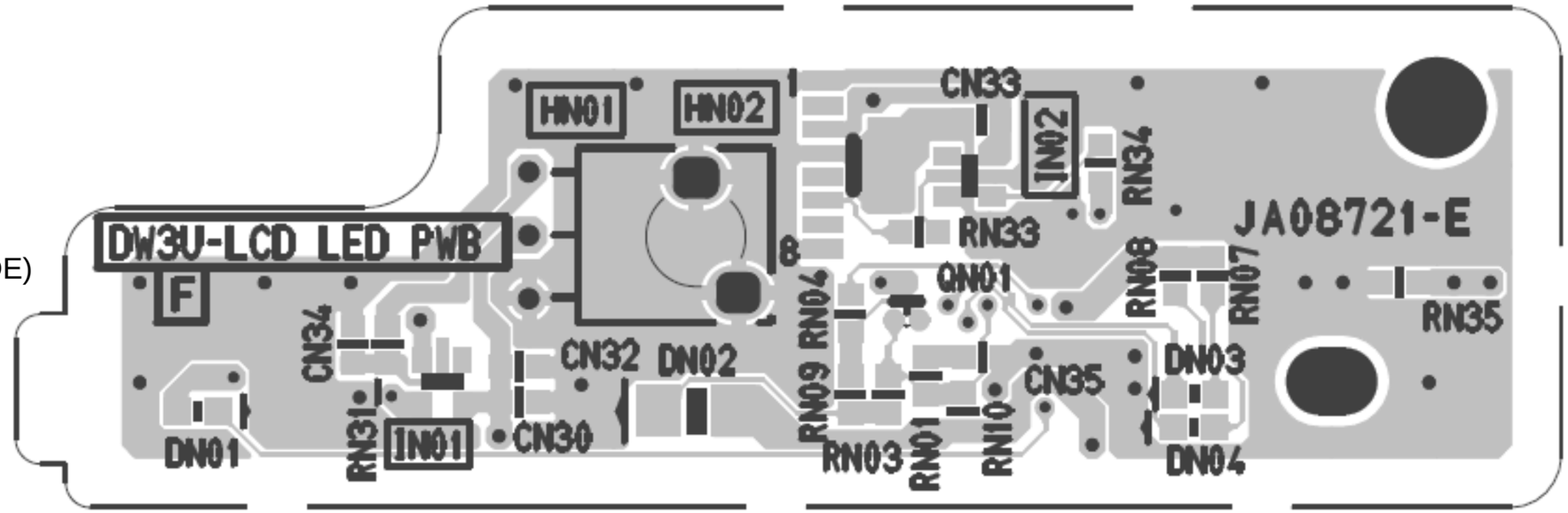
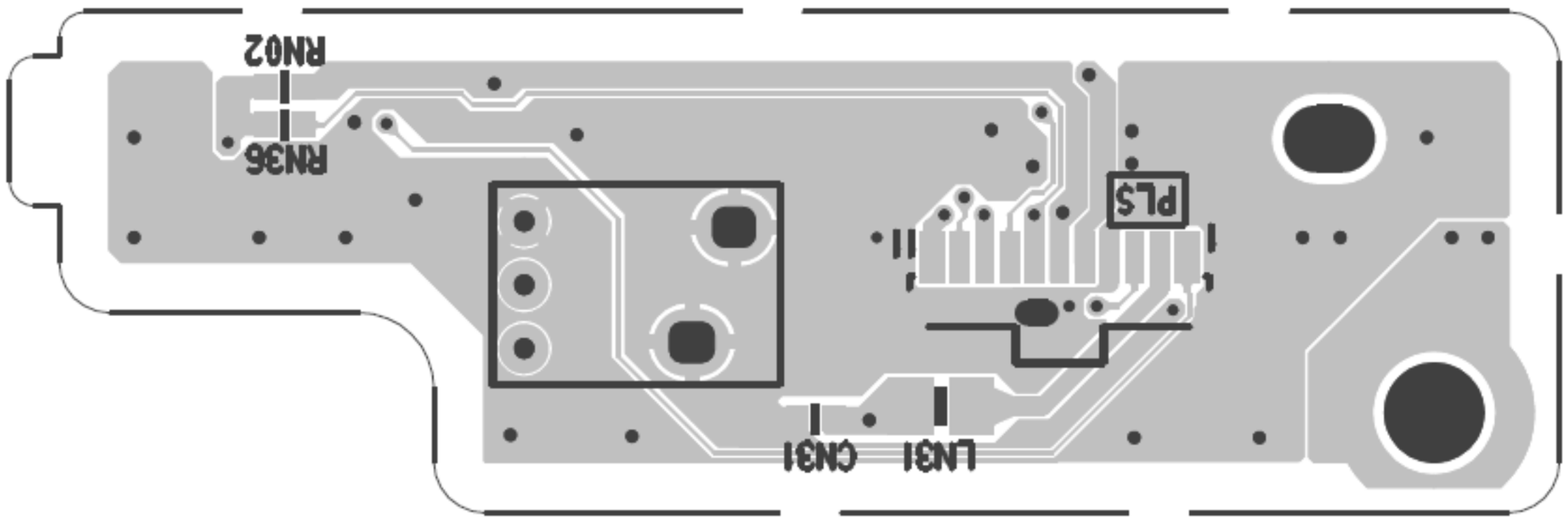
PRINTED CIRCUIT BOARDS

DW3-G "LED PWB" PWB p/n X480415

LED PWB (COMPONENT SIDE)



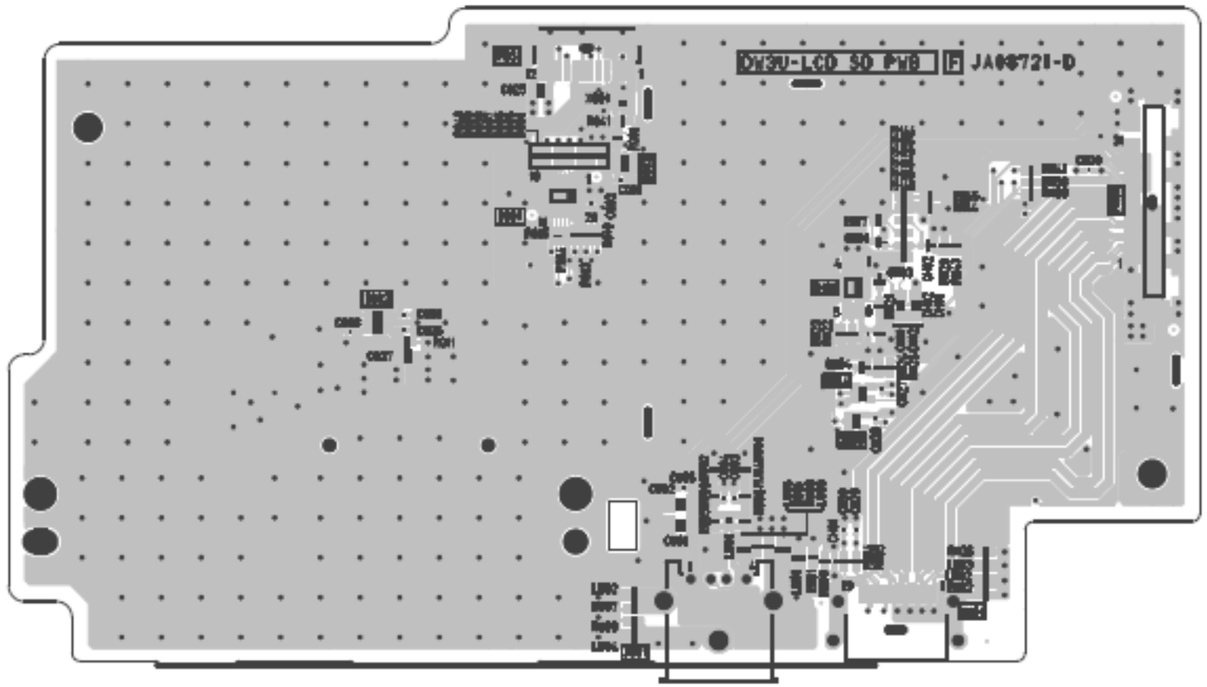
LED PWB (SOLDER SIDE)



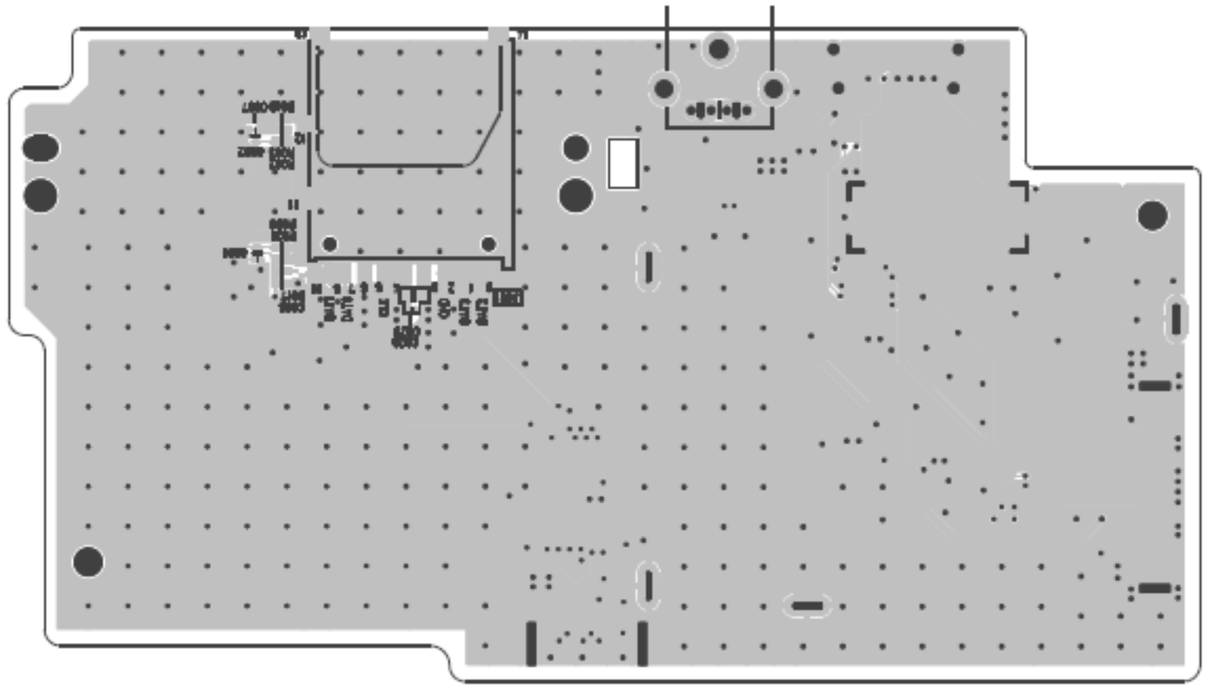
PRINTED CIRCUIT BOARDS

DW3-G "SD PWB" (MMC Upgrade Card) p/n X480414

SD PWB (COMPONENT SIDE)



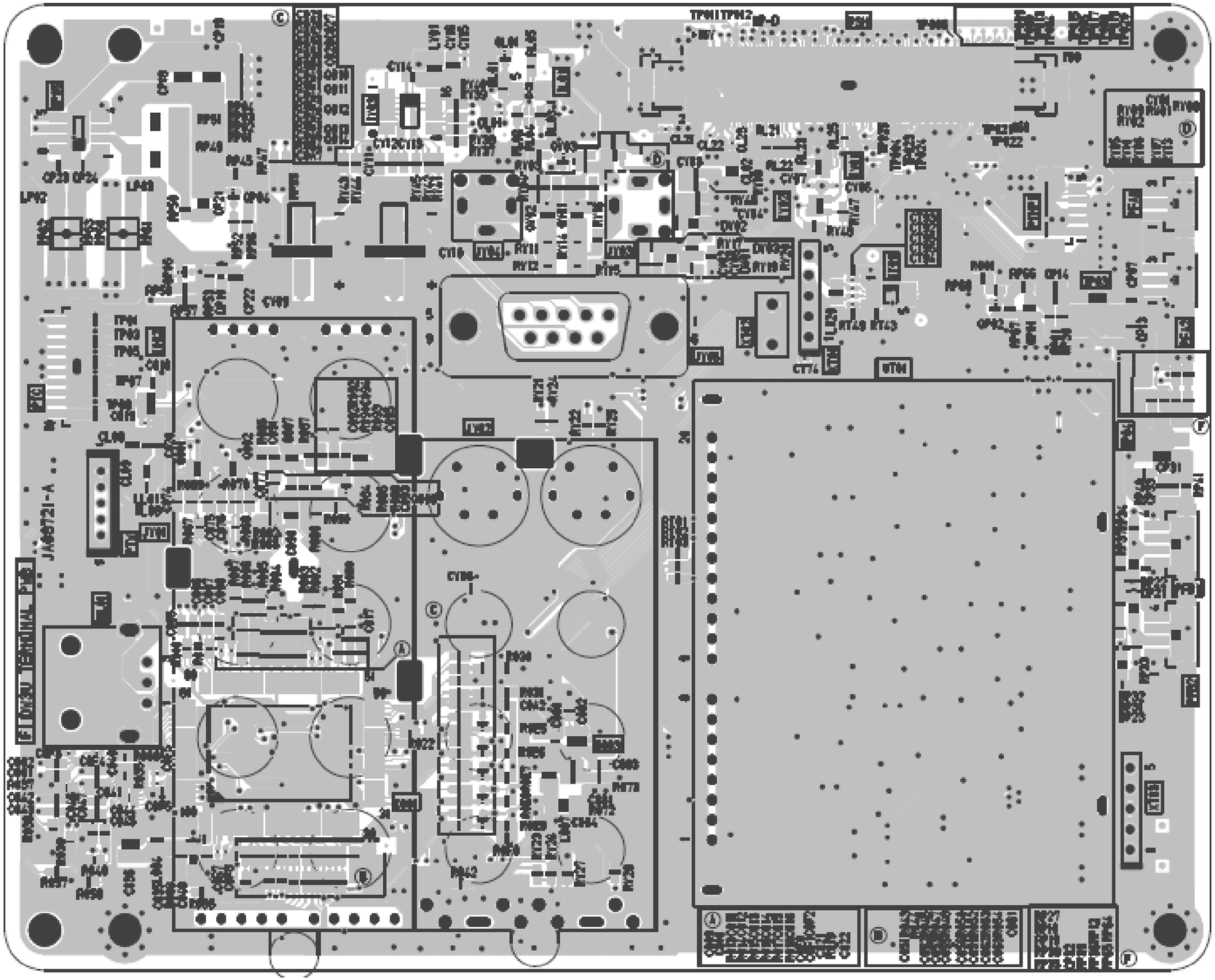
SD PWB (SOLDER SIDE)



PRINTED CIRCUIT BOARDS

DW3-G "TERMINAL PWB" p/n JP55126

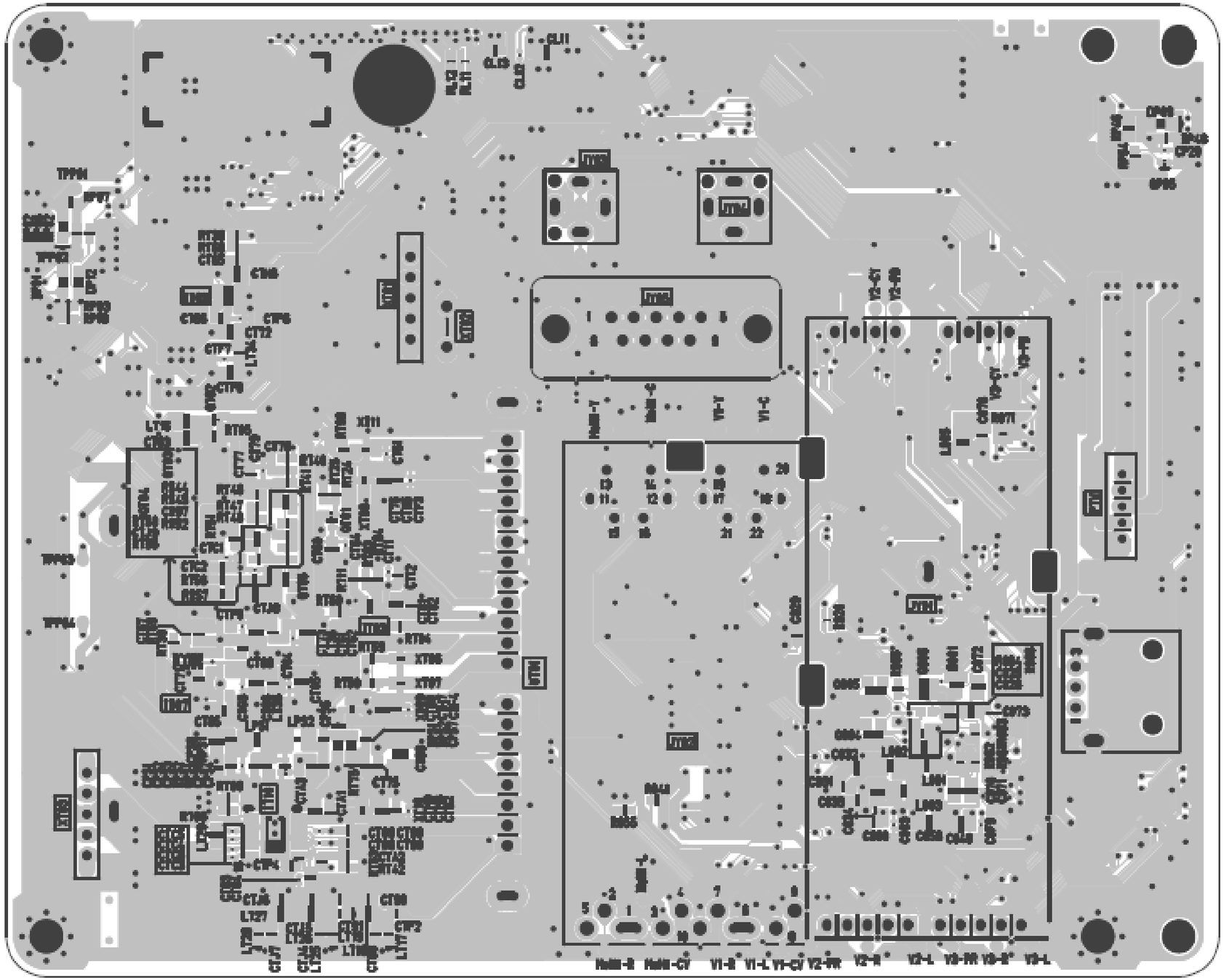
TERMINAL PWB
(COMPONENT SIDE)



PRINTED CIRCUIT BOARDS

DW3-G "TERMINAL PWB" p/n JP55126

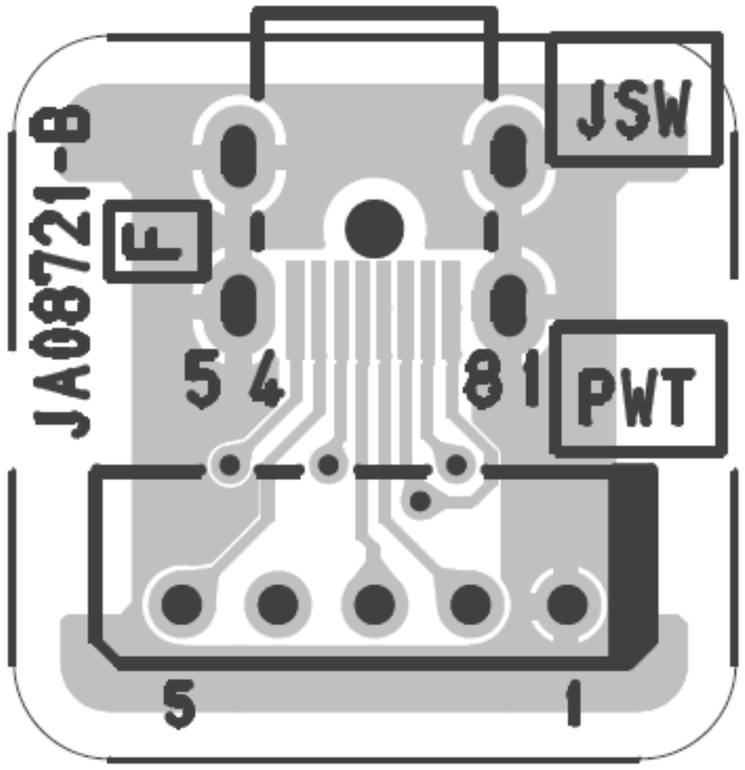
TERMINAL PWB
(SOLDER SIDE)



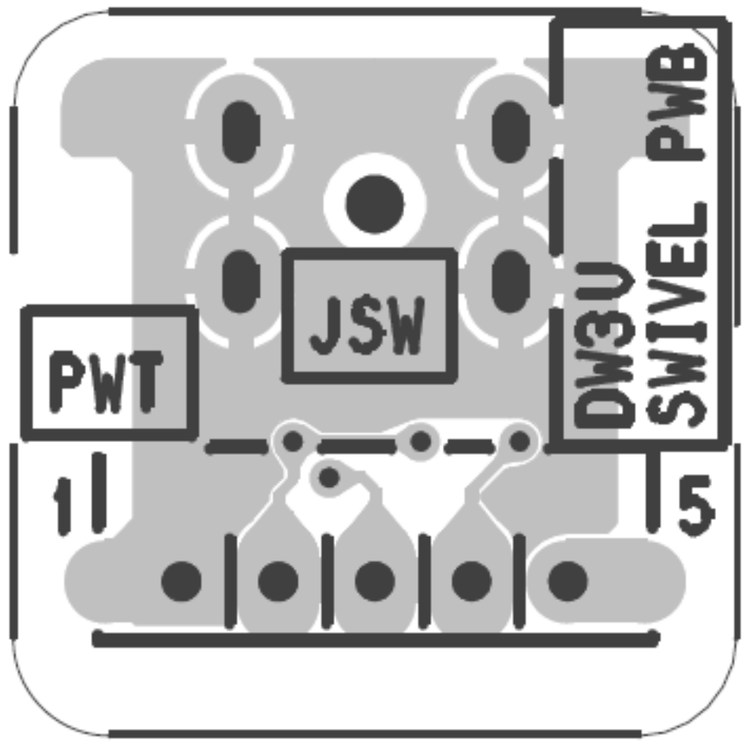
PRINTED CIRCUIT BOARDS

DW3-G "JSW PWB" Swivel Stand PWB p/n X480418

JSW PWB (COMPONENT SIDE)



JSW PWB (SOLDER SIDE)



PARTS LIST

For L47S601 and L47V651.

NOTE: All the electronic assembled boards are included in the Terminal PWB assembly.

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651	SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
TERMINAL PWB					C059	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0
		ASSEMBLY PART NUMBERS			C060	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
					C061	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
	JP55126	PSA DW3 TERMINAL JOB F	0	0	C062	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0
					C063	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0
					C070	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
					C071	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
					C072	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
			0	0	C073	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
					C078	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0
					C080	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
		CAPACITORS			C081	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0
					C082	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0
C001	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C083	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C002	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C090	AA00951R	CERAMIC CAPACITOR(1.0UF 16V)	0	0
C003	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	C091	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C004	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3	0	0	C092	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C005	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C093	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C006	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C094	AA01113R	CCC225K06-B-16CT	0	0
C007	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C095	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C008	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C0A2	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0
C009	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	C0F0	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C010	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	C0F1	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C011	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F2	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C012	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F3	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C013	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F4	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C014	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F5	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C015	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F6	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C016	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F7	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C017	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	C0F8	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C018	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	C0F9	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C019	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	CH01	0893348R	CCC103K25-B-10CT 1005-B-0.01UF	0	0
C020	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CH11	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C021	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CH12	AA01116R	CAP.CHIP1608-B-10UF 6.3V M	0	0
C022	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CH20	0893348R	CCC103K25-B-10CT 1005-B-0.01UF	0	0
C023	0893188R	CERAMIC CAPACITOR(47000PF 16V)	0	0	CH27	AA01216R	CAP.CHIP-CERAMIC 1005B 1UF 6.3	0	0
C024	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CH28	AA01216R	CAP.CHIP-CERAMIC 1005B 1UF 6.3	0	0
C025	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	CH29	CE00151R	EZJZ0V80010	0	0
C026	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	CH30	CE00151R	EZJZ0V80010	0	0
C027	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CL01	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C028	AA01343R	CERAMIC CAPACITOR(0.047UF 25V-	0	0	CL02	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3	0	0
C029	0893188R	CERAMIC CAPACITOR(47000PF 16V)	0	0	CL11	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C030	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CN30	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C031	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	CN32	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C032	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	CNJ1	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C033	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	CNJ2	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C034	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	CNJ3	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C035	AA01141R	CERAMIC CAPACITOR(0.1UF 16V)	0	0	CNJ4	AA00421R	CERAMIC CAPACITOR(10UF 16V)	0	0
C036	AA01185R	CAP.CHIP-CERAMIC 22UF/16V B 32	0	0	CP18	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3	0	0
C040	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP19	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3	0	0
C041	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP20	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C042	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP21	AA00699R	CAP.CHIP-CERAMIC 10UFK 16V B 3	0	0
C043	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP22	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C044	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP23	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0
C045	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CP24	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0
C046	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CPS1	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0
C047	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	CPS2	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C048	AA01115R	CAP.CHIP1608-B-4.7UF6.3V	0	0	CPS3	0893211R	CAP 1608CHIP 1500PFKB 50V TAPE	0	0
C049	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	CPS4	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE	0	0
C051	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CPS5	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0
C052	AA01343R	CERAMIC CAPACITOR(0.047UF 25V-	0	0	CPS6	0893127R	CAP 1608CHIP 120PFJCH 50V TAPE	0	0
C053	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CPS7	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0
C055	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CPS8	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0
C056	AA01121R	CERAMIC CAPACITOR(0.47UF 10V)	0	0	CQ01	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0
C058	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	CQ02	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0

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SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651	SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
CQ06	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0			DIODES		
CQ07	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0					
CQ08	0893348R	CCC103K25-B-10CT 1005-B-0.01UF	0	0	D001	CC01921R	SDS142WKF_PF	0	0
CQ25	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	DH01	CC01891R	SDS511_PF	0	0
CQ26	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	DH02	CC01891R	SDS511_PF	0	0
CQ27	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	DN01	CC01871R	LIGHT EMITTING DIODE	0	0
CQ28	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	DN02	CC01863R	LIGHT EMITTING DIODE (SML012BC4T)	0	0
CQ29	AA00969R	CAP.CHIP2125-B-22UF6.3V	0	0	DN03	CC01872R	LIGHT EMITTING DIODE	0	0
CQ30	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	DP10	CC02075R	ZENER.CHIP EDZ TE61 5.1B	0	0
CT11	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	DPS1	CC02022R	ZENER.CHIP UDZSTE-1730B	0	0
CT12	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	DPS2	CC01891R	SDS511_PF	0	0
CT60	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	DY01	CC01999R	ZENER.CHIP UDZSTE-174.3B	0	0
CT61	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	DY02	CC01999R	ZENER.CHIP UDZSTE-174.3B	0	0
CT62	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0					
CT63	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0					
CT64	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0			INTEGRATED CIRCUITS AND MODULES	0	0
CT65	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0					
CT66	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	HL01	CZ01391	ANALOG MONOLITHIC IC GP1FSV51TK0F)	0	0
CT67	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	HN01	CZ01371U	INFRARED DETECTING UNIT(GP1UE281RK0VF)	0	0
CT68	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	I001	CK53531U	R2S11008FP	0	0
CT71	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	I002	CK37218R	MONO IC TK11150CSCL	0	0
CT72	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	I003	CK51331R	TK11100CS	0	0
CT73	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	IH01	CK53582R	S-24CS02AFT-TB-G	0	0
CT74	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	IH04	CK55511R	1G LOGIC IC (TC7SG17FU)	0	0
CT75	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	IH05	CK55511R	1G LOGIC IC (TC7SG17FU)	0	0
CT76	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	IL01	CK50961R	SN74CB3T3306DCUR	0	0
CT77	0893208R	CAP 1608CHIP 1000PFKB 50V TAPE	0	0	IN01	CK55475R	1GATE LOGIC IC (TC7SZ14FU)	0	0
CT78	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	IP05	CK55331R	TX86287AM1	0	0
CT79	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	IQ01	CK53741R	TC7MBL3245AFK	0	0
CT80	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	IQ02	CK37216R	MONO IC TK11133CSCL	0	0
CT81	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	IQ03	CK55511R	1G LOGIC IC (TC7SG17FU)	0	0
CT85	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	IT03	CK53612R	TC7PA53FU	0	0
CT86	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	IT05	CK37218R	MONO IC TK11150CSCL	0	0
CT92	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	IT06	CK37605R	IC TK11250CM	0	0
CT93	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	IT07	CK37605R	IC TK11250CM	0	0
CT95	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	IT09	CK51152R	UPC3231GV	0	0
CT96	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	IY03	CK50027R	DIGITAL MONOLITHIC IC (MAX202I	0	0
CT97	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0					
CTC1	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0					
CTC2	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0			JACKS		
CTF3	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0					
CTF4	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JH01	EA01801U	HDMI RECEPTACLE SMT	0	0
CTF6	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JNJ1	EQ00403	JACK	0	0
CTF7	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JQ01	EY02191R	SD MEMORY CARD 54786-0971	0	0
CTF8	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	JSW	EA02231R	8P 0.45 PITCH SOCKET 3234	0	0
CTF9	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JY01	EQ00721	JACK	0	0
CTG1	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JY02	EQ00961	JACK	0	0
CTG2	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	JY03	EQ00741	JACK	0	0
CTG3	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0	JY05	EQ00771	JACK	0	0
CTG4	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0					
CTG5	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0					
CTH6	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0			INDUCTORS		
CTH7	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0					
CTJ8	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	L001	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CTM8	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	L002	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CTM9	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	L003	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CTN6	AA00937R	CAP.CHIP-CERAMIC 10UF 10V 2012BK	0	0	L004	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CY02	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0	L005	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CY03	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0	L007	BA00887R	LBC2518 CHIP COIL 10UH	0	0
CY04	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0	LNJ1	BA02646R	LBR2012 CHIP INDUCTOR 47UH	0	0
CY05	0893126R	CAP 1608CHIP 100PFJCH 50V TAPE	0	0	LPS1	BA02185R	HCC221J2520CT	0	0
CY08	0893222R	CAP 1608CHIP10000PFKB 50V TAPE	0	0	LPS2	BA02244R	HCC102J32CT	0	0
CY09	AD00433R	CEC471M10-EWCT	0	0	LT16	BM00151R	FILTER BLM21P300SPT	0	0
CY10	AD00433R	CEC471M10-EWCT	0	0	LT20	BA01127R	MLF2012 CHIP INDUCTOR 1.8UH	0	0
CY11	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	LT34	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0
CY12	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	LT35	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0
CY13	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	LT36	BM10348R	CHIP FERRITE BEAD BLM18PG121SN	0	0
CY14	AA01144R	CERAMIC CAP. 1608-B 1.0UF 16V	0	0	LY01	BA00894R	LBC2518 CHIP COIL 100UH	0	0
CY15	AA01231R	0.1UF 16V 1005-B CERAMIC CAPAC	0	0					
CY16	AA00966R	CERAMIC CAPACITOR(4.7UF 6.3V)	0	0					

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651	SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
		CONNECTOR TERMINALS			R029	0790024R	RES.CHIP 1/16W 100 OHM	0	0
					R035	AQ00537R	4-NETWORKED CHIP RESISTOR 1.0K	0	0
PCST	EA04044R	14P 1.25MM PITCH CONNE. (502382)	0	0	R036	AQ00537R	4-NETWORKED CHIP RESISTOR 1.0K	0	0
PDS	EA02352R	12P 1.0MM PITCH CONNE. -501568-1207	0	0	R037	AQ03344R	RES.CHIP 1/16W 100KOHM	0	0
PH01	EA02652R	PLUG	0	0	R038	AQ03344R	RES.CHIP 1/16W 100KOHM	0	0
PLS	EA02331R	11P 1.0MM PITCH CONNE. 501331-	0	0	R039	AQ03344R	RES.CHIP 1/16W 100KOHM	0	0
PSM	EA02223U	0.5 PITCH 160P B TO B CONN. SHIELD TYPE RECE	0	0	R040	AQ03344R	RES.CHIP 1/16W 100KOHM	0	0
PTC	EA04039R	10P 1.25MM PITCH CONNE. (502382)	0	0	R041	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
PTW	ED01073	PLUG	0	0	R042	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
PWT	ED01053	CONNECTOR	0	0	R043	0790024R	RES.CHIP 1/16W 100 OHM	0	0
					R044	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
					R045	0790024R	RES.CHIP 1/16W 100 OHM	0	0
		TRANSISTORS			R047	0790024R	RES.CHIP 1/16W 100 OHM	0	0
					R048	0790024R	RES.CHIP 1/16W 100 OHM	0	0
Q002	CA02162R	SUT487J	0	0	R050	0790024R	RES.CHIP 1/16W 100 OHM	0	0
Q004	CA03271R	SMD TRS 2SD2704K	0	0	R052	0790024R	RES.CHIP 1/16W 100 OHM	0	0
Q005	CA03271R	SMD TRS 2SD2704K	0	0	R053	0790024R	RES.CHIP 1/16W 100 OHM	0	0
Q006	CA01181R	D-TRS.CHIP IMD10A	0	0	R054	0790024R	RES.CHIP 1/16W 100 OHM	0	0
Q007	CA02162R	SUT487J	0	0	R055	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
Q008	CA14091R	PHOTO TRANSISTOR	0	0	R056	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
Q010	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R058	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
Q011	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R061	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0
Q012	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R062	AQ03343R	RES.CHIP 1/16W 82KOHM	0	0
Q013	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R063	AQ03308R	RES.CHIP 1/16W 220OHM	0	0
Q014	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R064	AQ03331R	RES.CHIP 1/16W 10KOHM	0	0
QH01	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	R065	0790051R	RES.CHIP 1/16W 10K OHM	0	0
QH02	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	R066	0790073R	RES.CHIP 1/16W 470K OHM	0	0
QH03	CA02092R	SRC1202EF	0	0	R068	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0
QH04	1323293R	TRS.CHIP 2SC4617 TL (R/S)	0	0	R071	AQ00544R	CHIP RESISTOR 3.3KOHM	0	0
QL01	CA02091R	SRC1204EF_PF	0	0	R072	AQ00266R	RES.CHIP 1/16W 510K OHM TAPE	0	0
QNJ1	CA14091R	PHOTO TRANSISTOR	0	0	R073	AQ00245R	RES.CHIP 1/16W 82K OHM TAPE	0	0
QNJ2	CA14091R	PHOTO TRANSISTOR	0	0	R080	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
QP04	1323294R	TRS.CHIP 2SA1774 TL (R/S)	0	0	R082	0790059R	RES.CHIP 1/16W 47K OHM	0	0
QP05	CA14091R	PHOTO TRANSISTOR	0	0	R083	0790059R	RES.CHIP 1/16W 47K OHM	0	0
QP06	CA02091R	SRC1204EF_PF	0	0	R084	0790051R	RES.CHIP 1/16W 10K OHM	0	0
QPS1	CA14091R	PHOTO TRANSISTOR	0	0	R085	0790064R	RES.CHIP 1/16W 100K OHM	0	0
QQ01	CA02091R	SRC1204EF_PF	0	0	R086	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
QQ02	CA02091R	SRC1204EF_PF	0	0	R087	0790064R	RES.CHIP 1/16W 100K OHM	0	0
QT01	CA14091R	PHOTO TRANSISTOR	0	0	R088	0790064R	RES.CHIP 1/16W 100K OHM	0	0
QT02	CA14091R	PHOTO TRANSISTOR	0	0	R089	0790064R	RES.CHIP 1/16W 100K OHM	0	0
QT03	CA02171R	TRS.CHIP 2SC4082T106P	0	0	R090	0790051R	RES.CHIP 1/16W 10K OHM	0	0
QT04	CA02171R	TRS.CHIP 2SC4082T106P	0	0	R091	0790051R	RES.CHIP 1/16W 10K OHM	0	0
QT05	CA02171R	TRS.CHIP 2SC4082T106P	0	0	R092	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
					R093	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
					R0E0	0790015R	RES.CHIP 1/16W 22 OHM	0	0
		RESISTORS			R0E1	0790015R	RES.CHIP 1/16W 22 OHM	0	0
					R0E2	0790015R	RES.CHIP 1/16W 22 OHM	0	0
R002	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E3	0790015R	RES.CHIP 1/16W 22 OHM	0	0
R003	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E4	0790015R	RES.CHIP 1/16W 22 OHM	0	0
R004	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E5	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R005	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E6	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R006	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E7	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R007	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0	R0E8	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R008	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0	R0E9	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R010	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0	R0F0	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R011	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0	RH03	0790024R	RES.CHIP 1/16W 100 OHM	0	0
R013	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH04	0790024R	RES.CHIP 1/16W 100 OHM	0	0
R014	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH05	0790024R	RES.CHIP 1/16W 100 OHM	0	0
R015	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH14	0790064R	RES.CHIP 1/16W 100K OHM	0	0
R016	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH15	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
R017	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH17	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
R018	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH18	0790024R	RES.CHIP 1/16W 100 OHM	0	0
R019	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH19	0790051R	RES.CHIP 1/16W 10K OHM	0	0
R020	AQ03317R	RES.CHIP 1/16W 1KOHM	0	0	RH20	0790051R	RES.CHIP 1/16W 10K OHM	0	0
R022	AQ03361R	RES.CHIP 1/16W 0OHM	0	0	RH21	0790051R	RES.CHIP 1/16W 10K OHM	0	0
R028	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RH22	0790059R	RES.CHIP 1/16W 47K OHM	0	0

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651	SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
RH23	0790059R	RES.CHIP 1/16W 47K OHM	0	0	RNL3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RH24	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	RNL5	AQ00501R	CHIP RESISTOR 0OHM	0	0
RH25	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	RNL6	AQ00501R	CHIP RESISTOR 0OHM	0	0
RH26	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RP45	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RH38	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RP46	0790024R	RES.CHIP 1/16W 100 OHM	0	0
RH39	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RP47	0790024R	RES.CHIP 1/16W 100 OHM	0	0
RH41	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RP49	AQ01954R	RES.CHIP RK73B3ATTE 5R6J	0	0
RH43	0790051R	RES.CHIP 1/16W 10K OHM	0	0	RP50	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RH44	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RP51	AQ01938R	RES.CHIP RK73B3ATTE 1R5J	0	0
RL01	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	RP52	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RL02	0790027R	RES.CHIP 1/16W 180 OHM	0	0	RP53	0790077R	RES.CHIP 1/16W 1.0M OHM	0	0
RL03	0790027R	RES.CHIP 1/16W 180 OHM	0	0	RP55	0790024R	RES.CHIP 1/16W 100 OHM	0	0
RL04	AQ03331R	RES.CHIP 1/16W 10KOHM	0	0	RP56	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RL05	AQ03361R	RES.CHIP 1/16W 0OHM	0	0	RP57	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RL08	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RP60	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL11	AQ03299R	RES.CHIP 1/16W 47OHM	0	0	RP61	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL12	AQ03299R	RES.CHIP 1/16W 47OHM	0	0	RP62	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL21	0790019R	RES.CHIP 1/16W 47 OHM	0	0	RP63	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL22	0790019R	RES.CHIP 1/16W 47 OHM	0	0	RPG1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL23	0790019R	RES.CHIP 1/16W 47 OHM	0	0	RPG2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RL25	AQ03299R	RES.CHIP 1/16W 47OHM	0	0	RPG3	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RN02	0790039R	RES.CHIP 1/16W 1.5K OHM	0	0	RPG4	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RN03	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RPS1	0790024R	RES.CHIP 1/16W 100 OHM	0	0
RN08	0790034R	RES.CHIP 1/16W 560 OHM	0	0	RPS2	0790059R	RES.CHIP 1/16W 47K OHM	0	0
RN31	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RQ02	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RN36	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RQ03	0790038R	RES.CHIP 1/16W 1.2K OHM	0	0
RNC3	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ05	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNC4	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0	RQ06	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNC5	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0	RQ07	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNC6	0790039R	RES.CHIP 1/16W 1.5K OHM	0	0	RQ09	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RNC7	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ10	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNC8	0790051R	RES.CHIP 1/16W 10K OHM	0	0	RQ11	0790061R	RES.CHIP 1/16W 56K OHM	0	0
RNJ1	0790044R	RES.CHIP 1/16W 3.3K OHM	0	0	RQ13	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNJ2	0790042R	RES.CHIP 1/16W 2.2K OHM	0	0	RQ14	0790015R	RES.CHIP 1/16W 22 OHM	0	0
RNJ3	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ15	AQ00501R	CHIP RESISTOR 0OHM	0	0
RNJ4	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ17	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNJ5	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RQ18	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNJ6	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ21	0790038R	RES.CHIP 1/16W 1.2K OHM	0	0
RNJ7	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0	RQ31	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0
RNJ8	0790024R	RES.CHIP 1/16W 100 OHM	0	0	RQ38	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNJ9	0790061R	RES.CHIP 1/16W 56K OHM	0	0	RQ39	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNK1	0790069R	RES.CHIP 1/16W 270K OHM	0	0	RQ40	0790019R	RES.CHIP 1/16W 47 OHM	0	0
RNK2	0790069R	RES.CHIP 1/16W 270K OHM	0	0	RQ41	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNK6	0790061R	RES.CHIP 1/16W 56K OHM	0	0	RT01	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNK7	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RT02	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNK8	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RT03	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNK9	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RT04	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RNL1	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RT05	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RNL2	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0	RT11	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
					RT24	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
RT25	0790051R	RES.CHIP 1/16W 10K OHM	0	0
RT38	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RT39	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RT40	0790052R	RES.CHIP 1/16W 12K OHM	0	0
RT41	0790052R	RES.CHIP 1/16W 12K OHM	0	0
RT43	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RT44	AQ00164R	CHIP RESITOR 1/16W 75OHM TAPE	0	0
RT45	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0
RT46	AQ00258R	RES.CHIP 1/16W 270K OHM TAPE	0	0
RT47	AQ00247R	RES.CHIP 1/16W 100K OHM TAPE	0	0
RT48	AQ00229R	RES.CHIP 1/16W 22K OHM TAPE	0	0
RT50	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0
RT51	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RT52	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0
RT55	0790052R	RES.CHIP 1/16W 12K OHM	0	0
RT56	AQ00212R	RES.CHIP 1/16W 4.7K OHM TAPE	0	0
RT57	AQ00244R	RES.CHIP 1/16W 75K OHM TAPE	0	0
RT58	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0
RT59	0790046R	RES.CHIP 1/16W 4.7K OHM	0	0
RT60	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RT75	0790043R	RES.CHIP 1/16W 2.7K OHM	0	0
RT83	0790052R	RES.CHIP 1/16W 12K OHM	0	0
RT84	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RT98	0790055R	RES.CHIP 1/16W 22K OHM	0	0
RY17	0790028R	RES.CHIP 1/16W 220 OHM	0	0
RY18	0790028R	RES.CHIP 1/16W 220 OHM	0	0
RY19	0790028R	RES.CHIP 1/16W 220 OHM	0	0
RY20	0790028R	RES.CHIP 1/16W 220 OHM	0	0
RY21	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0
RY22	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0
RY23	AQ00163R	RES.CHIP 1/16W 68 OHM TAPE	0	0
RY24	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RY25	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RY26	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RY27	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RY28	0790064R	RES.CHIP 1/16W 100K OHM	0	0
RY37	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY38	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY39	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY40	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY41	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY42	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY43	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY44	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY45	0790037R	RES.CHIP 1/16W 1.0K OHM	0	0
RY46	0790056R	RES.CHIP 1/16W 27K OHM	0	0
RY47	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
RY48	0790001R	CHIP RESISTOR RECJUMPER-1-16C16T1608	0	0
		SWITCHES		
SNC1	FB00021R	CHIP PUSH SWITCH	0	0
SNC2	FB00021R	CHIP PUSH SWITCH	0	0
SNC3	FB00021R	CHIP PUSH SWITCH	0	0
SNC4	FB00021R	CHIP PUSH SWITCH	0	0
SNC5	FB00021R	CHIP PUSH SWITCH	0	0
SNC6	FB00021R	CHIP PUSH SWITCH	0	0
SNC7	FB00021R	CHIP PUSH SWITCH	0	0

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
		MODULES		
UT01	HC00701	ENGD6305	0	0
		FILTER CHIPS		
XT01	BG01624U	SAW FILTER(X6875D)	0	0
XT02	BN00261	BGS TRAP MKTGA47M2CAHP00B05	0	0
XT06	BK00321R	CERAMIC FILTER NFL21SP206X1C7D	0	0
XT07	BK00321R	CERAMIC FILTER NFL21SP206X1C7D	0	0
XT08	AZ01102R	NOISE FILTER SGM20F1C104-4A	0	0
XT09	AZ01102R	NOISE FILTER SGM20F1C104-4A	0	0
XT10	AZ01102R	NOISE FILTER SGM20F1C104-4A	0	0
XT11	AZ01102R	NOISE FILTER SGM20F1C104-4A	0	0
		FINAL ASSEMBLY		
		ASSEMBLY PART NUMBER		
		SPEAKERS		
SPB	GK01671	SPEAKER 6X12	0	0
		MISCELLANEOUS		
A	DD024891K	FLT LC470WU4	0	0
E901	EP00411	AC INLET SK-1015(F1-0)	0	0
U1	HA02471	POWER UNIT	0	0
		CONNECTORS	0	0
			0	0
ECN1	EF25793	51P LVDS CABLE L=230MM (FI-R - FI-R)	0	0
ECN2	EF27352	9P PH-502380 CONNE. L=230MM	0	0
EFAC	EF28361	2P VT-FASTON (#250) L=170MM CONNE.	0	0
EFG	EF23841	CO-01T-F0R0-500-SRT	0	0
EGND	EF24041	CO-01T-T0R0-101	0	0
ELCD2	EF28681	14J KR IDC CONNECTOR	0	0
ELCD3	EF28601	12J IDC KR CONNECTOR	0	0
EMH	EK01935	31P FI-R FFC LVDS CABLE L=250MM UL2896	0	0
EPM1	EF27362	8P EH-502380 CONNE. L=180MM	0	0
EPM2	EF27714	15P EH-DF3/PAP CONNE. L=550MM	0	0
ERF	EY02262	PLUG L NIC8014N	0	0
ESD	EF27431	12P 1.0MM PITCH 501330 CONNE. L=240MM	0	0
ESL	EF27424	11P 1.0MM PITCH 501330 CONNE. L=530MM	0	0
ESP1	EF28351	4P PAP-FASTON (#110/187) L=1,190/590MM CONNE.	0	0
ESTC	EF27403	14P 1.25MM PITCH 502380-GH CONNE. L=350MM	0	0

PRODUCT SERVICE NOTE: Components marked with a ⚠ have special characteristics important to safety. Before replacing any of these components, carefully read the product safety notice of this service manual. Don't degrade the safety of the receiver through improper servicing.

SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651	SYMBOL	PART No.	DESCRIPTION	L47S601	L47V651
		FERRITE CORES	0	0			ACCESORIES		
NFAC	GX00732	MAGNET K5CRC16X28X9-M2G2 !	0	0	E01 △	EV01841	POWER CORD 125V10A UL/CSA	0	0
NLTS	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	E203	FR10162	DRY BATTERY R6P(AR) E2PT	0	0
NLTSA	GX00731	MAGNET K5CRC12X15X7-MG2	0	0	ESWVL	EW08434	8P PLUG CODE L=470MM	0	0
NPM1	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	N01	QR72211	DW3 LCD INST. BOOK	0	
NPM1A	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	N01	QR72721	DW3 LCD V651 INST.BOOK		0
NPM2	GX00734	MAGNET K5CRC26X30X13-MG2	0	0	N02	QR72431	DW3 LCD EASY GUIDE	0	
NPM2A	GX00731	MAGNET K5CRC12X15X7-MG2	0	0	N02	QR72731	DW3 LCD V651 EASY GUIDE		0
NSD1	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	N203	QT44792	2007 CANADA WARRANTY CARD	0	0
NSP1	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	N204	QT49441	NATIONAL WARRANTY CARD 2006	0	0
NSP1A	GX00731	MAGNET K5CRC12X15X7-MG2	0	0	U01	HL02403	REMOTE CONTROL UNIT CLU-4373A	0	
NSP1B	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0	U01	HL02404	REMOTE CONTROL UNIT CLU-4374A		0
NSTC	GX00732	MAGNET K5CRC16X28X9-M2G2	0	0					

Part numbers for main boards and assemblies

MODEL	CHASSIS	MAIN CHASSIS [1]	TERMINAL PWB	MAIN DIGITAL PWB [2]	POWER UNIT	LCD PANEL	INVERTERS
L47S601	DW3G	n/a	JP55126	**UX30312**	HA02471	DD02491K	Not Available Part of Panel
L47V651	DW3G	n/a	JP55126	**UX30313**	HA02471	DD02491K	Not Available Part of Panel

CH 1

NOTES:

1. Chassis not available as a part.
2. If the Digi-Main PWB is replaced, Make Sure the replacement PWB has the most recent Software Version.
   For most recent Software Version, see http://www.hitachiserviceusa.com, click on Training and then on Software Version.

For other PWBs not listed in the Table above, see Page 76 through Page 81.

QUICK REFERENCE PARTS LIST IC'S AND UNITS

No.	SYMBOL	PART No.	DESCRIPTION	PWB ASS'Y	L47V651	L47S601
1	A21	JP55157	L47S601 MA-DIG. SERVICE PARTS	Main digital		0
2	A21	JP55157	L47V651 MA-DIG. SERVICE PARTS	Main digital	0	
3	DN01	CC01871R	LIGHT EMITTING DIODE	LED	0	0
4	DN02	CC01863R	LIGHT EMITTING DIODE (SML012BC4T)	LED	0	0
5	DN03	CC01872R	LIGHT EMITTING DIODE	LED	0	0
6	HL01	CZ01391	ANALOG MONOLITHIC IC (GP1FSV51TK0F)		0	0
7	HN01	CZ01371U	INFRARED DETECTING UNIT(GP1UE281RK0VF)	LED	0	0
8	HN02	CZ01261R	IRDA MODULE IC (RPM871-H12)	LED	0	0
9	E901	EP00411	AC INLET SK-1015(F1-0)		0	0
10	I001	CK53531U	R2S11008FP	TERMINAL	0	0
11	I002	CK37218R	MONO IC TK11150CSCL	TERMINAL	0	0
12	I003	CK51331R	TK11100CS	TERMINAL	0	0
13	IH01	CK53582R	S-24CS02AFT-TB-G	CONTROL	0	0
14	IH04	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC1G126DCK)	CONTROL	0	0
15	IH05	CK38329R	DIGITAL MONOLITHIC IC (SN74LVC1G126DCK)	CONTROL	0	0
16	IL01	CK50961R	SN74CB3T3306DCUR		0	0
17	IN01	CK55475R	1GATE LOGIC IC (TC7SZ14FU)	LED	0	0
18	IN02	CK55511R	1G LOGIC IC (TC7SG17FU)	LED	0	0
19	IP03	CK52481R	TK73400TCB-G		0	0
20	IP05	CK55331R	TX86287AM1		0	0
21	IQ01	CK53741R	TC7MBL3245AFK	SD-CARD	0	0
22	IQ02	CK37216R	MONO IC TK11133CSCL	SD-CARD	0	0
23	IQ03	CK55511R	1G LOGIC IC (TC7SG17FU)	SD-CARD	0	0
24	IT03	CK53612R	TC7PA53FU		0	0
25	IT05	CK37218R	MONO IC TK11150CSCL		0	0
26	IT06	CK37605R	IC TK11250CM		0	0
27	IT07	CK37605R	IC TK11250CM		0	0
28	IT09	CK51152R	UPC3231GV		0	0
29	IT10	CK51141R	UPC3220GR		0	0
30	IY03	CK50027R	DIGITAL MONOLITHIC IC (MAX202I		0	0
31	JH01	EA02291U	HDMI RECEPTACLE DC1R019HBA		0	0
32	JQ01	EY01772R	SD MEMORY CARD 500998-0900	SD-CARD	0	0
33	U1	HA02471	POWER UNIT		0	0
34	UT01	HC00701	ENGD6305		0	0